

# U A C



University of Alberta—Calgary

1962-63

# CALENDAR





# REGISTRATION SCHEDULE

University of Alberta, Calgary

1962-63

## **Tuesday, August 14**

Last day for receiving applications for admission.

## **Monday, September 10**

Last day for registration in the Evening Credit Program.

## **Monday, September 24**

**9:00 a.m.** The Principal will address all First Year students.  
Physical Education Building.

**10:30 a.m.** Students' Union meeting for all First Year students.  
Physical Education Building.

**1:00 p.m.** First Year Registration:  
Faculties of Arts and Science, and Commerce.  
Surnames A to M. Physical Education Building.  
Faculty of Education. Physical Education Building.  
Faculty of Engineering. Room 104 (Amphitheatre),  
Science & Engineering Building.  
School of Physical Education.  
Physical Education Building.

**3:00 p.m.** First Year Registration.  
Faculties of Arts and Science, and Commerce.  
Surnames N to Z. Physical Education Building.

## **Tuesday, September 25**

**9:00 a.m.** Second Year Registration. All faculties. Locations as above.

**1:30 p.m.** Third and Fourth Year Registration. All faculties.  
Locations as above.

## **Wednesday, September 26**

**8:00 a.m.** First Year Tests. All women students. Physical Education Building.

**1:30 p.m.** First Year Tests. All men students. Physical Education Building.

## **Thursday, September 27**

**9:00 a.m.** Registration in B.Ed. Programs for Holders of Approved Degrees. Room 223-229, Arts & Education Building.

Registration in shop courses for Industrial Arts students. Southern Alberta Institute of Technology.

**2:30 p.m.** Admission Ceremony. All students, all years, all faculties. Southern Alberta Jubilee Auditorium.  
Public invited.

**4:00 - 6:00 p.m.** Part-time and Special students Registration.  
Room 223-229, Arts & Education Building.

## **Friday, September 28**

Lectures begin for all students.







# GENERAL INFORMATION

## ADMISSION

All First Year students and students in B.Ed. Program for Holders of Approved Degrees must present an Admission Card from the Registrar's Office when appearing for registration.

All Second, Third and Fourth Year Arts and Science students must present a schedule of courses approved by their Faculty Office when appearing for registration.

## FEES

Fees must be paid by October 15 or a late payment penalty will be imposed. Students are advised to use cheques made payable to the University of Alberta rather than cash for payment of fees.

To avoid delay students may place cheques with fee card stubs attached in a deposit box outside the General Office in the Arts and Education Building. Cash payments, however, must be made to the Cashier in the General Office.

## ADMISSION CEREMONY

New students will be formally admitted to the University of Alberta, Calgary, at 2:30 p.m. on Thursday, September 27, in the Southern Alberta Jubilee Auditorium. All students are expected to attend.

## PSYCHOLOGICAL TESTING

Tests will be conducted in the Physical Education Building, on Wednesday, September 26, for all First Year students.

## CLASS CARDS

Class cards are required for admission to the first lecture of each course in which a student is registered, and must be given to the instructor at that time. These cards are issued to the student on registration and must conform with the courses entered on the student's permanent record.

## CHANGES IN PROGRAM

Changes made in the subjects of a program after registration is completed must be approved by the Dean of the Faculty concerned.

## LIBRARY INSTRUCTION

The Library staff will provide instruction in the use of the library from 4:00 to 4:45 p.m. daily, October 1 to 5 inclusive. Students should report to the Circulation Desk. October 1—surnames A to E; October 2—surnames F to J; October 3—surnames K to O; October 4—surnames P to T; October 5—surnames U to Z.

## CALGARY ADDRESSES

Students who register without a Calgary address are required to report to the General Office, Arts and Education Building, as soon as accommodation is found.

## AUTOMOBILES

Students must register any automobile that will be brought on the campus. A date by which such registration must be completed will be announced. A driver's license, a pink card as proof of financial responsibility, and a fee card stub are required to register. Failure to observe this regulation will make the student liable to a \$25 fine.

## SOCIAL EVENTS

A number of social activities are planned by the Students' Union during the week of September 24 to 29. These will be advertised separately.







# Table of Contents

## University of Alberta, Calgary



## CALENDAR

1962 - 1963

The University of Alberta is a co-educational, publicly supported institution of higher education, with two main campuses located in the cities of Edmonton and Calgary.

Instruction at the University in Edmonton began in September 1908. In the years since that time a comprehensive program of undergraduate teaching has been developed on the Edmonton Campus. A Faculty of Graduate Studies was established there in 1957.

The University of Alberta, Calgary was established on its present site in September, 1960. Course offerings now include first, second and third years of arts and science, three years of Physical Education, two years of engineering, two years of commerce, four years of education and introductory courses required by other faculties. Graduate courses are also offered in certain fields of studies.

The University is located on three hundred acres of land in north-west Calgary. At present there are an Arts and Education building, a Science and Engineering building, and a Physical Education building on campus. A modern library building and another teaching building will be ready in the fall of 1963.

Details of the programs available at both campuses of the University are included in this calendar. As the calendar is published well in advance of the opening of the session, the University reserves the right to make whatever changes circumstances may require, including cancellation of particular courses.

June 1, 1962.



# Table of Contents

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## PART I: THE UNIVERSITY

	Page
1. Introduction .....	2
2. General Organization of the University of Alberta, Calgary .....	4
3. Calendar of University Activities, 1962-63 .....	12

## PART II.: GENERAL REGULATIONS OF THE UNIVERSITY

4. Admission Procedures .....	16
5. Registration Procedures .....	18
6. Academic Regulations .....	19
7. Student Services .....	26

## PART III: PROGRAMS OF STUDY

8. Outline of Programs, Edmonton and Calgary .....	30
9. Table of Admission Requirements, Edmonton and Calgary .....	32
10. Schedule of Fees .....	34
11. Curriculum Outline, University of Alberta, Calgary .....	39
(a) Arts and Science .....	40
(b) Agriculture .....	91
(c) Commerce .....	99
(d) Education .....	105
(e) Engineering .....	131
(f) Household Economics .....	135
(g) Medicine and Dentistry .....	137
(h) Nursing .....	139
(i) Physical Education .....	145
(j) Graduate Studies .....	149
12. Awards and Financial Assistance .....	150
(a) Officer Training Units .....	189

## PART IV:

13. Timetable, 1962-63 .....	197
14. Index .....	207

# *General Organization of the University of Alberta, Calgary*

## *1. Governing Body of the University of Alberta*

### **VISITOR**

THE HONOURABLE JOHN PERCY PAGE, B.A., B.C.S., LL.D., Lieutenant Governor of Alberta.

### **CHANCELLOR**

HIS HONOUR JUDGE LAURANCE YEOMANS CAIRNS, B.A., LL.D.

### **PRESIDENT**

WALTER HUGH JOHNS, B.A., Ph.D., LL.D.

### **PRINCIPAL**

MALCOLM GORDON TAYLOR, M.A., Ph.D.

### **THE BOARD OF GOVERNORS**

CHARLES MALCOLM MACLEOD, Q.C., LL.B., LL.D., Chairman

HIS HONOUR JUDGE LAURANCE YEOMANS CAIRNS, B.A., LL.D., Chancellor of the University.

WALTER HUGH JOHNS, B.A., Ph.D., LL.D., President.

FREDERICK GAVIN STEWART, Esq., Deputy Provincial Treasurer.

WILLIAM HERBERT SWIFT, B.A., M.A., B.Ed., Ph.D., Deputy Minister of Education.

DONALD RUSSELL STANLEY, B.Sc., S.M., Ph.D., Vice-President of the Alumni Association.

MERRILL DAVIS MUTTART, Esq.

JOHN WRIGHT PROCTOR, Esq.

MRS. M. L. McCULLOUGH.

F. CLARENCE MANNING, B.A.

JOHN HOWARD KELLY, Esq.

JOHN MACLEAN WHIDDEN, B.Com., Bursar, Secretary of the Board.



## THE SENATE

### Statutory Members

HIS HONOUR JUDGE LAURANCE YEOMANS CAIRNS, B.A., LL.D., Chancellor of the University.

WALTER HUGH JOHNS, B.A., Ph.D., LL.D., President.

CHARLES MALCOLM MACLEOD, Q.C., LL.B., LL.D., Chairman of the Board of Governors.

MALCOLM GORDON TAYOR, M.A., Ph.D., Principal.

CHARLES FRED BENTLEY, M.Sc., Ph.D., representative of the Deans' Council, to retire June 1, 1963.

EDMUND JABEZ THOMPSON, M.A., Ph.D., D.D., Principal of St. Stephen's College.

BROTHER PRUDENT, M.A., Rector of St. Joseph's College.

The Rector of St. Aidan's College.

TIMOTHY CLARKE BYRNE, M.A., Ed.D., Chief Superintendent of Schools.

ERNEST WILLIAM WOOD, M.E.I.C., M.I.Mar.E., Principal, Southern Alberta Institute of Technology.

REVEREND WILLIAM JOHN COLLETT, B.A., B.Ed., B.D., M.A., Principal, Mount Royal Junior College.

HAUGHTON THOMSON, B.Com., President of Alumni Association.

DONALD RUSSELL STANLEY, B.Sc., S.M., Ph.D., Vice-President of the Alumni Association.

SIDNEY A. LINDSTEDT, B.Sc., M.Ed., Provost at Calgary.

HAROLD STEWART BAKER, B.A., M.A., Ph.D., L.A.B., representative of the General Faculty Council, to retire June 1, 1963.

HAROLD JOHNSTON BRODIE, M.Sc., Ph.D., representative of the General Faculty Council, to retire June 1, 1963.

DARROCH DUNCAN CAMPBELL, B.Com., B.A., M.A., Director of Extension.

PETER S. HYNDMAN, President of the Students' Union, Edmonton.

MAURICE YACOWAR, President of the Students' Union, Calgary.

### Appointed Members to Retire November 1, 1963

GRANT M. CARLYLE, Calgary, representing Agriculture.

MAURICE EARL HARTNETT, B.S.A., representing Agriculture.

M. W. HOWEY, B.A., LL.B., Grand Prairie, representing Business.

FRANK BODIE, Calgary, representing Labor.

STANLEY H. McCUAIG, Q.C., representing Industry.

ANNE CARMICHAEL, Edmonton.

MRS. CATHERINE ANDREWS, Lethbridge.

WARD A. STECKLE, Calgary, representing Public Education.

JAMES S. McCORMICK, Q.C., representing Organizations devoted to Social and Cultural Welfare.

ALEXANDER DUNCAN CAIRNS, B.A., Registrar of the University, Secretary of the Senate.

## 2—*Administrative Officers, Calgary*

President, Walter H. Johns, B.A., Ph.D., LL.D.

Principal, University of Alberta, Calgary—MALCOLM G. TAYLOR, M.A., Ph.D.

Dean of the Faculty of Arts and Science—

Dean of the Faculty of Education—HAROLD S. BAKER, M.A., Ph.D.

Administrative Officer, Faculty of Arts and Science—EARL F. GUY, M.A., Ph.D.

Secretary, Faculty of Engineering—H. RUSSELL McARTHUR, B.A.Sc., M.A., D.L.S.

School of Physical Education—LUTHER G. GOODWIN, M.A., B.Ed., M.Ed.

Administrative Officer, Faculty of Commerce.

Director of the Summer Session and of the Evening Credit Program—THEO G. FINN, A.M., Ed.D.

Advisor to Men Students and Acting Provost—SIDNEY A. LINDSTEDT, B.Sc., M.Ed.

Advisor to Women Students—MRS. FRANK H. FISH, B.A.

Director of Medical Services—D. L. McNEIL, M.D., F.R.C.P.(C).

Registrar—JOHN NICOL, M.A.

Business Officer—J. WILLIAM CARVER, B.Sc., M.B.A.

Dietitian—MISS DONNA CHRISTIE, B.H.E.

Superintendent of Buildings and Grounds—J. A. WEBB, B.Sc.

### LIBRARY STAFF

Ryder, Dorothy E., B.A. (UBC), B.L.S. (McGill), Librarian.

Skeith, Mary E., B.A. (Queen's), B.L.S. (McGill), Chief Processing Librarian.

Macleod, Flora M., M.A. (Alberta), B.L.S. (Toronto), Reference and Circulation Librarian.

Rees, Philip D., B.A. (UBC), B.Ed. (UBC), B.L.S. (Toronto), Order Librarian.

Milne, Hazel E., B.A. (Saskatchewan), B.L.S. (Toronto), Library Assistant, Cataloguing.

Scheffer, Edith C., B.A. (UBC), B.L.S. (McGill), Library Assistant, Cataloguing.

Smith, Helen M., B.A. (Queen's), B.L.S. (UBC), Library Assistant, Cataloguing.

### STUDENT COUNSELLING SERVICES

E. R. Oetting, M.Sc., Ph.D., Director.

Miss H. McWilliam, B.A., Counsellor.

### OFFICE HOURS:

Monday through Friday

—8:30 a.m. to 12:00 noon  
1:15 p.m. to 4:30 p.m., all year.

Saturday

—8:30 a.m. to 12:00 noon,  
mid-September to mid-May.

### 3—Teaching Staff

- ADAM, F. C., B.A., M.Sc. (UBC), Ph.D. (Washington); Assistant Professor of Chemistry (1958, 1958).
- ADAM, I. W., B.A. (Alberta), M.A. (London); Assistant Professor of English (1960, 1960).
- AIKENHEAD, J. D., B.Sc. (Manitoba), A.M. (Chicago), Ed.D. (Oregon); Associate Professor of Education, Calgary (1950, 1954).
- ALEXANDER, JEAN, B.S., M.A. (Notre Dame), Ph.D. (Michigan), Assistant Professor of English (1961, 1961).
- ALLEN, S. D., B.Com. (Alberta); M.B.A. (Western Ontario); Sessional Lecturer in Commerce.
- ANDERSON, P. K., A.B. (Cornell), M.S. (Tulane), Ph.D. (California); Assistant Professor of Zoology (1961, 1961).
- ANDERSON, R. N., B.A., B.Ed. (Saskatchewan), M.A. (Minnesota), Associate Professor of Secondary Education (1959, 1962).
- ANTON, F. R., B.Sc. (London), M.A. (UCLA), Associate Professor of Political Economy (1959, 1962).
- ARMSTRONG, D. A., B.Sc., Ph.D. (McGill); Assistant Professor of Chemistry (1958, 1958).
- BAKER, H. S., B.A. (Toronto), M.A. (Alberta), Ph.D. (Columbia); Dean of Education (1947, 1962).
- BEATON, MARY A., B.Sc., M.Ed. (Alberta); Assistant Professor of Education (1959, 1959).
- BENN, M. H., B.Sc., Ph.D., (London); Assistant Professor of Chemistry (1961, 1961).
- BIGG, W. L., B.Sc. (Alberta); Associate Professor of Civil Engineering (1957, 1962).
- BIRD, C. D., M.Sc., Ph.D. (Oklahoma State); Assistant Professor of Botany 1962, 1962).
- BOAL, F. W., B.A., M.A. (Queens-Belfast); M.S. (Michigan); Assistant Professor of Geography (1961, 1961).
- BOUDREAU, J.; Assistant Professor of History (1962, 1962).
- BOWEN, J. E., B.A., M.Ed. (Sydney), Ph.D. (Illinois); Assistant Professor of Education (1961, 1961).
- BRATTON, R., B.A. (George Williams), M.S. (California); Lecturer in Physical Education (1961, 1961).
- BRESKY, Dushan, Assistant Professor of Modern Languages (1962, 1962).
- BREUGELMANS, R., M.A., Ph.D. (Ghent); Assistant Professor of Modern Languages, (1961, 1961).
- BROOKS, John D., Assistant Professor of English (1962, 1962).
- BROWN, A. F., B.A., B.Ped. (Manitoba), M.Ed., Ph.D. (Alberta); Assistant Professor of Educational Administration (1961, 1961).
- BROWN, R. C., B.A. (Rochester), M.A. (Toronto); Assistant Professor of History (1961, 1961).
- BUCKMASTER, H. A., B.Sc. (Alberta), M.A., Ph.D. (UBC); Associate Professor of Physics (1957, 1961).
- BURGESS, G. D., B.A. (Saskatchewan), M.Sc. (McGill); Sessional Instructor in Zoology (1960, 1960).
- CAIRNS, Allan T. J., Sessional Lecturer in English (1962, 1962).
- CHALLICE, C. E., B.Sc., Ph.D. (London), A.R.C.S., D.I.C., F.Inst.P.; Associate Professor of Physics (1957, 1959).
- CHALLIS, Lorna, B.A. (London); Lecturer in English (1961, 1962).
- CHORNY, M., M.Ed. (Alberta); Assistant Professor of Secondary Education (English) 1960, 1960).
- CHURCHLEY, F. E., B.Mus. (Toronto), M.A., Ed.D. (Columbia), A.R.C.T., L.R.C.T. (Toronto); Associate Professor of Fine Arts (Education) (1959, 1962).



- DAS, Sisor Chandra; Assistant Professor of Mathematics (1962, 1962).
- de PAIVA, H. A. R., B.Sc. (Alberta), M.S., Ph.D. (Illinois); Assistant Professor of Civil Engineering (1961, 1961).
- DEWAR, J., B.Ed. (Alberta), M.A. (Ohio); Assistant Professor of Physical Education (1961, 1961).
- \*DODD, E. M., B.A. (Dunelm), M.A. (Ohio State); Assistant Professor of Fine Arts (Education), (1960, 1960).
- \*DOIGE, A. G., B.E., M.Sc. (Saskatchewan); Assistant Professor of Mechanical Engineering (1960, 1960).
- DOOLITTLE, Q. D., B.S. (Ithaca College), M.M. (Indiana); Assistant Professor of Fine Arts (Education) (1960, 1960).
- DOUGHERTY, J. P. Lecturer in English (1962, 1962).
- DUQUETTE, Shirley A., A. B.Sc. in Ed. (Cincinnati); Instructor in Physical Education (1959, 1959).
- ECCLES, PRISCILLA, J., M.S., Ed.D. (Illinois); Assistant Professor of Secondary Education (Science) 1960, 1960).
- FINN, S. G., B.A., M.A. (Colorado College), Ph.D. (State University of Iowa); Assistant Professor of Fine Arts (Education) (1961, 1961).
- FINN, T. G., B.A. (Alberta), A.M., Ed.D. (Stanford); Professor of Elementary Education, Director of Summer Session and Evening Credit Program (1946, 1959).
- FORBIS, R. L., B.A., M.A. (Montana State), Ph.D. (Columbia); Instructor in Archaeology.
- FROST, B. P., B.A. Hons. (Sydney), M.A. (Tasmania), P.G.C.E. (London); Assistant Professor of Education and Clinical Psychology (1961, 1961).
- GAUDETTE, D. A., B.Sc., B.Ed. (Alberta); Sessional Instructor in Industrial Arts, (Southern Alberta Institute of Technology).
- GANDY, W. E., A.M. (Western State, Colorado), Ed.D. (Stanford); Assistant Professor of Elementary Education (Social Studies) (1960, 1960).
- GIBB, A. A., B.Sc., B.Ed. (Alberta), M.A. (Toronto), Ed.D. (Stanford); Associate Professor of Mathematics (1951, 1955).
- \*GLOCKNER, P., B.Sc. (McGill), M.Sc. (MIT); Associate Professor of Civil Engineering (1958, 1962).
- GOODWIN, L. G., M.A., B.Ed., M.Ed. (Alberta); Professor of Physical Education (1946, 1959).
- GUY, E. F., M.A. (Dalhousie), Ph.D. (Edinburgh); Associate Professor of English, and Administrative Officer, Arts and Science (1953, 1959).
- HARMS, A., B.A. (Saskatchewan); Assistant Professor of Modern Languages (1959, 1959).
- HARTLAND-ROWE, R. C. B., B.Sc., Ph.D. (London); Associate Professor of Zoology (1959, 1959).
- HEBBERT, R. H. B., B.A.Sc. (UBC), M.Sc. (Queen's); Assistant Professor of Mechanical Engineering (1960, 1960).
- HEINTZ, J., A.B. (St. Lawrence University) Assistant Professor of Philosophy (1960, 1960).
- HENDERSON, NANCY E., M.Sc. (Dalhousie), Ph.D. (Toronto); Assistant Professor of Zoology (1962, 1962).
- \*HENDRICKSON, M. P., B.A., B.P.E., (Alberta); Assistant Professor of Physical Education (1959, 1960).
- HEYMANN, F. G., Ph.D. (Frankfurt); Professor of History (1959, 1961).
- HOLLAND, A. S. B., B.Sc. (Victoria University, N.Z.); Lecturer in Mathematics (1958, 1958).
- HUMPHRIES, M., B.A., M.A., Ph.D. (Toronto); Assistant Professor of Psychology (1961, 1961).

- HYNE, J. B., B.Sc., Ph.D. (St. Andrews); Associate Professor of Chemistry (1960, 1960).
- INLOW, E. BURKE, A.B. (Washington), M.A. (California), Ph.D. (Johns Hopkins); Associate Professor of Political Economy (1961, 1961).
- JACOBSON, Ada L., S.B. (MIT), Ph.D. (Yale); Research Associate in Chemistry.
- JENSEN, F., M.A. (Copenhagen), Ph.D. (California); Assistant Professor of Modern Languages (1961, 1961).
- JOHNSON, J. M., B.A., LL.B. (Alberta); Sessional Instructor in Commercial Law.
- KING, B., B.A. (Columbia), Ph.D. (Leeds); Assistant Professor of English (1961, 1961).
- KING, ADELE, B.A. (Iowa), M.A. (Leeds); Part-time Sessional Instructor in Modern Languages.
- \*KING, ETHEL M., B.Ed. (Alberta), M.A. (Iowa); Associate Professor of Elementary Education (1955, 1962).
- KIYOOKA, H. M., B.Ed. (Alberta), B.F.A. (Manitoba), M.A. (Michigan State), M.F.A. (Colorado); Assistant Professor of Fine Arts (Education) (1961, 1961).
- KRUEGER, P. J., M.Sc. (Manitoba), D.Phil. (Oxon); Assistant Professor of Chemistry (1959, 1959).
- KUEBER, ELEANOR, B.P.E. (UBC); Sessional Instructor in Physical Education (1961, 1962).
- L'ABBE, GERMAINE, M.A. (Queen's); Assistant Professor of French (1959, 1960).
- LINDSTEDT, SIDNEY A., B.Sc., M.Ed. (Alberta); Associate Professor of Secondary Education (1955, 1955).
- MAGEE, WILLIAM H., B.A. (UBC), M.A. (UBC), Ph.D. (Toronto); Associate Professor of English (1962, 1962).
- McARTHUR, H. R., B.A.Sc. (UBC), M.A. (Washington), D.L.S.; Associate Professor of Applied Mechanics (1954, 1957); Secretary of the Faculty of Engineering.
- McCAUGHAN, J. B., B.Sc., M.Sc. (Sydney); Research Associate in Physics.
- McGUGAN, A., B.Sc. (Queens, Belfast); Sessional Lecturer in Geology.
- MacINTOSH, D. F., B.Ed. in Phys. Ed. (Alberta); Assistant Professor of Physical Education (1958, 1959).
- MAMO, P. S., B.A., M.A. (Toronto); Assistant Professor of Philosophy (1961, 1961).
- MILLS, D. L., B.A. (Idaho), M.A., Ph.D. (Stanford); Assistant Professor of Sociology (1961, 1961).
- MOSQUIN, T., B.Sc. (Manitoba), Ph.D. (California); Assistant Professor of Botany (1961, 1962).
- NELSON, J. G., B.A. (McMaster), M.A. (Colorado), Ph.D. (Johns Hopkins); Assistant Professor of Geography (1960, 1960).
- NELSON, S. J., M.A.Sc. (UBC), Ph.D. (McGill); Associate Professor of Geology (1954-1962).
- NEWTON, BERTHA M., B.Sc. in Ed. (Southern California), A.M. (Chicago), Ed.D. (Missouri); Associate Professor of Education (Language Arts), (1945, 1955).
- NOBUSAWA, N.; Assistant Professor of Mathematics (1962, 1962).
- NORRIS, S., B.Ed. (Alberta), A.M. (Stanford); Associate Professor of Elementary Education (1956, 1962).
- OETTING, E. R., B.Sc., M.Sc., Ph.D. (Wisconsin); Associate Professor of Psychology and Director of Student Counselling Services (1961, 1961).
- OLIVER, T. A., McSc. (Manitoba), Ph.D. (California); Assistant Professor of Geology (1959, 1959).
- OYLER, J. E., M.A. (Alberta), Ph.D. (Northwestern); Assistant Professor of German (1960, 1960).
- PECK, J. E. L., M.Sc. (South Africa), Ph.D. (Yale); Associate Professor of Mathematics (1959, 1959).

- PLOTNICK, A. R., B.A. (Temple), M.A., Ph.D. (Penn); Assistant Professor of Political Economy (1961, 1961).
- POWER, PATRICIA, B.P.E. (UBC); Instructor in Physical Education (1961, 1961).
- PRESCOTT, J. R., B.Sc. (Adelaide), Ph.D. (Melbourne), D.Phil. (Oxon); Assistant Professor of Physics (1961, 1961).
- PRINCE, A. R., B.A. (Acadia), M.A. (Harvard); Associate Professor of Botany (1951, 1955).
- RAY, D. E.; Assistant Professor of English, (1962, 1962).
- SCARGILL, M. H., B.A., Ph.D. (Leeds); Professor of English (1948, 1958).
- SCHAER, Jonathan; Assistant Professor of Mathematics (1962, 1962).
- SCHONFIELD, A. E. D., M.A. (Cantab); Associate Professor of Psychology (1957, 1959).
- SCHWARTZ, M.; Assistant Professor of Sociology (1962, 1962).
- SELF, G. M., M.A. (McGill), Ph.D. (Chicago); Associate Professor of History (1947, 1955).
- SHARMA, A.; Associate Professor of Mathematics (1962, 1962).
- SHIELDS, R. A. M., M.A. (Manitoba), Ph.D. (Penn); Assistant Professor of History (1960, 1960).
- SHIMRAT, M., B.Sc., M.Sc. (Jerusalem), Ph.D. (Jerusalem & Manchester); Assistant Professor of Mathematics (1961, 1961).
- SNIDER, J. G., M.S. (Idaho); Assistant Professor of Educational Psychology (1960, 1960).
- SORENSEN, T. S., B.Sc. (Hons.) (Alberta), Ph.D. (Wisconsin); Assistant Professor of Chemistry (1962, 1962).
- SPENCE, D. L.; Assistant Professor of Sociology (1962, 1962).
- STADELBAUER, HELEN B., B.Sc., M.A. (Columbia); Associate Professor of Fine Arts (Education) (1945, 1955).
- STEIN, W. W., A.B. (Buffalo), Ph.D. (Cornell); Assistant Professor of Anthropology (1961, 1961).
- STILWELL, W. H., B.A. (Drake), M.A. (Toronto); Associate Professor of Civil Engineering (1957, 1960).
- STOREY, A. G., B.A., BEd. (Saskatchewan), M.Ed. (Alberta), Ph.D. (Stanford); Associate Professor of Secondary Education (1956, 1959).
- TAVARES, D. F., A.B. (Brown), Ph.D. (Yale); Assistant Professor of Chemistry (1962, 1962).
- TAYLOR, M. G., M.A., Ph.D. (California); Professor of Political Science and Principal (1960, 1960).
- TAYLOR, M. J.; Lecturer in English (1962, 1962).
- TERENTIUK, F., B.Sc. (Alberta), M.A., Ph.D. (UBC); Associate Professor of Physics (1958, 1961).
- TOEWS, J. B.; Lecturer in History (1962, 1962).
- VANCE, M. W., B.Com. (Saskatchewan), C.A.; Assistant Professor of Accounting (1961, 1961).
- WEIR, M. R. S., B.Sc., Ph.D. (Berkeley); Instructor in Chemistry (1962, 1962).
- WILSON, B. G., B.Sc. (Queen's, Belfast), Ph.D. (National University of Ireland); Associate Professor of Physics (1957, 1960).
- WINSPEAR, A. D., B.A. (Queen's), M.A. (Oxon); Professor of Classics (1957, 1962).
- WOODSWORTH, J. G., B.A., B.Ed. (Alberta), Ed.D. (Stanford); Professor of Educational Psychology (1951, 1962).
- WRIGHT, R. W.; Assistant Professor of Political Economy (1962, 1962).
- ZENTER, H., B.A. (UBC), M.A., Ph.D. (Stanford); Associate Professor of Sociology (1960, 1962).

(\* Staff on leave of absence 1962/63.)



1962

## CALENDAR

1962

S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
JANUARY							APRIL							JULY							OCTOBER						
...	1	2	3	4	5	6	1	2	3	4	5	6	7	1	2	3	4	5	6	7	7	1	2	3	4	5	6
7	8	9	10	11	12	13	8	9	10	11	12	13	14	8	9	10	11	12	13	14	7	8	9	10	11	12	13
14	15	16	17	18	19	20	15	16	17	18	19	20	21	15	16	17	18	19	20	21	14	15	16	17	18	19	20
21	22	23	24	25	26	27	22	23	24	25	26	27	28	22	23	24	25	26	27	28	21	22	23	24	25	26	27
28	29	30	31	...	...	...	29	30	...	...	...	...	...	29	30	31	...	...	...	...	28	29	30	31	...	...	...
FEBRUARY							MAY							AUGUST							NOVEMBER						
4	5	6	7	8	9	10	6	7	8	9	10	11	12	5	6	7	8	9	10	11	4	5	6	7	8	9	10
11	12	13	14	15	16	17	13	14	15	16	17	18	19	12	13	14	15	16	17	18	11	12	13	14	15	16	17
18	19	20	21	22	23	24	20	21	22	23	24	25	26	19	20	21	22	23	24	25	21	22	23	24	25	26	27
25	26	27	28	...	...	...	27	28	29	30	31	...	...	26	27	28	29	30	31	...	25	26	27	28	29	30	...
MARCH							JUNE							SEPTEMBER							DECEMBER						
...	...	...	...	1	2	3	...	...	...	...	1	2	...	...	...	...	1	2	3	4	...	...	...	...	1	2	3
11	12	13	14	15	16	17	3	4	5	6	7	8	9	2	3	4	5	6	7	8	2	3	4	5	6	7	8
18	19	20	21	22	23	24	10	11	12	13	14	15	16	9	10	11	12	13	14	15	9	10	11	12	13	14	15
25	26	27	28	29	30	31	17	18	19	20	21	22	23	16	17	18	19	20	21	22	16	17	18	19	20	21	22
...	...	...	...	...	...	...	24	25	26	27	28	29	30	23	24	25	26	27	28	29	23	24	25	26	27	28	29
...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	...	...	...	...	...	...	30	31	...	...	...	...	...

1963

## CALENDAR

1963

S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
JANUARY							APRIL							JULY							OCTOBER													
				1	2	3	4	5				1	2	3	4	5	6				1	2	3	4	5									
6	7	8	9	10	11	12		7	8	9	10	11	12	13		7	8	9	10	11	12	13		6	7	8	9	10	11	12				
13	14	15	16	17	18	19		14	15	16	17	18	19	20		14	15	16	17	18	19	20		13	14	15	16	17	18	19				
20	21	22	23	24	25	26		21	22	23	24	25	26	27		21	22	23	24	25	26	27		20	21	22	23	24	25	26				
27	28	29	30	31				28	29	30						28	29	30	31					27	28	29	30	31						
FEBRUARY							MAY							AUGUST							NOVEMBER													
						1	2					1	2	3	4						1	2	3					1	2					
3	4	5	6	7	8	9		5	6	7	8	9	10	11		4	5	6	7	8	9	10		3	4	5	6	7	8	9				
10	11	12	13	14	15	16		12	13	14	15	16	17	18		11	12	13	14	15	16	17		10	11	12	13	14	15	16				
17	18	19	20	21	22	23		19	20	21	22	23	24	25		18	19	20	21	22	23	24		17	18	19	20	21	22	23				
24	25	26	27	28				26	27	28	29	30	31		25	26	27	28	29	30	31		24	25	26	27	28	29	30					
MARCH							JUNE							SEPTEMBER							DECEMBER													
						1	2							1		1	2	3	4	5	6	7						1	2	3	4	5	6	7
3	4	5	6	7	8	9		2	3	4	5	6	7	8		8	9	10	11	12	13	14						8	9	10	11	12	13	14
10	11	12	13	14	15	16		9	10	11	12	13	14	15		15	16	17	18	19	20	21						15	16	17	18	19	20	21
17	18	19	20	21	22	23		16	17	18	19	20	21	22		22	23	24	25	26	27	28						22	23	24	25	26	27	28
24	25	26	27	28	29	30		23	24	25	26	27	28	29		29	30											29	30	31				

1964

## CALENDAR

1964

S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
JANUARY							APRIL							JULY							OCTOBER								
..	..	..	..	1	2	3	4	..	..	..	..	1	2	3	4	..	..	..	..	1	2	3	4	..	..	..	1	2	3
5	6	7	8	9	10	11	5	6	7	8	9	10	11	5	6	7	8	9	10	11	4	5	6	7	8	9	10		
12	13	14	15	16	17	18	12	13	14	15	16	17	18	12	13	14	15	16	17	18	11	12	13	14	15	16	17		
19	20	21	22	23	24	25	19	20	21	22	23	24	25	19	20	21	22	23	24	25	18	19	20	21	22	23	24		
26	27	28	29	30	31	..	26	27	28	29	30	..	..	26	27	28	29	30	31	..	25	26	27	28	29	30	31		
FEBRUARY							MAY							AUGUST							NOVEMBER								
2	3	4	5	6	7	8	3	4	5	6	7	8	9	2	3	4	5	6	7	8	1	2	3	4	5	6	7		
9	10	11	12	13	14	15	10	11	12	13	14	15	16	9	10	11	12	13	14	15	8	9	10	11	12	13	14		
16	17	18	19	20	21	22	17	18	19	20	21	22	23	16	17	18	19	20	21	22	15	16	17	18	19	20	21		
23	24	25	26	27	28	29	24	25	26	27	28	29	30	23	24	25	26	27	28	29	22	23	24	25	26	27	28		
..	..	..	..	..	..	..	31	..	..	..	..	..	..	30	31	..	..	..	..	..	29	30	..	..	..	..	..		
MARCH							JUNE							SEPTEMBER							DECEMBER								
1	2	3	4	5	6	7	..	..	..	..	1	2	3	4	5	6	..	..	..	..	1	2	3	4	5	6	7		
8	9	10	11	12	13	14	7	8	9	10	11	12	13	6	7	8	9	10	11	12	6	7	8	9	10	11	12		
15	16	17	18	19	20	21	14	15	16	17	18	19	20	13	14	15	16	17	18	19	13	14	15	16	17	18	19		
22	23	24	25	26	27	28	21	22	23	24	25	26	27	20	21	22	23	24	25	26	20	21	22	23	24	25	26		
29	30	31	..	..	..	..	28	29	30	..	..	..	..	27	28	29	30	..	..	..	27	28	29	30	31	..	..		

# Calendar of University Activities

1962-63

## July—

Sunday, 1—

University year begins.

Tuesday, 3

Confirmation of registration of Summer Session students.

Wednesday, 4—

Summer Session lectures begin.

Tuesday, 10—

Last day for payment of 1962 Summer Session fees.

Monday, 16—

Last day for application for Graduate degrees to be conferred at Fall Convocation.

## August—

Wednesday, 1—

Last day for students with unsatisfactory university records to notify the Student Counselling Services that they are seeking re-admission.

Last day for applications from new students for Evening credit courses.

Friday, 10—

Last day for receiving applications for supplemental examinations.

Tuesday, 14—

Last day for receiving formal applications for admission except in M.D. (April 2), D.D.S. (May 15) and Graduate programs (Aug. 31).

Thursday, 16—

Summer Session ends.

Monday, 20—

Supplemental examinations begin in Medicine and Dentistry.

## September—

Monday, 3—

Labor Day; University buildings closed.

Monday, 10—

Last day for receiving registrations in the Evening Credit Program (including students in the Faculty of Graduate Studies).

Supplemental examinations begin except in Medicine and Dentistry (see August 20).

September, 15—

Last day for filing by M.D. and D.D.S. students of applications for grants and loans under Students' Assistance Act.

Monday, 17 to Thursday, 27—

Registration of Graduate Students, except those in Evening Credit Program (see September 10).

Monday, 24—

Last day for submission of theses by graduate students expecting to receive their degrees at Fall Convocation.

Monday, 24 to Thursday, 27—

Registration of all students in Agriculture, Arts and Science, Commerce, Education, Engineering, Household Economics, Medical Laboratory Science, Nursing, Pharmacy, Physical Education, and Physical and Occupational Therapy according to published schedule.

Friday, 28—

Regular lectures begin for all students registering in previous four days.

Saturday, 29—

Special supplemental examinations.



## **October—**

Monday, 1—

Evening Credit Program classes begin.

Last day for filing by other than M.D. and D.D.S. students of applications under the Students' Assistance Act.

Monday, 8—

Thanksgiving Day; University Buildings closed.

Thursday, 11—

Last day for oral examination of Masters and Doctoral candidates for Fall Convocation.

Monday, 15—

Last day for payment of undergraduate fees.

## **November—**

Saturday, 3—

Notice of intention to be absent from Fall Convocation must be given by 12:00 noon.

Saturday, 10—

(Afternoon)—Fall Convocation (to be held in Calgary).

Monday, 12 to Saturday, 17—

Test Week\*

## **December—**

Thursday, 20—

Last day of lectures before Christmas vacation.

Friday, 21—

Christmas vacation begins.

## **1963**

### **January—**

Wednesday, 2—

Christmas vacation ends.

Thursday, 3—

8:00 a.m. First term lectures resume.

Last day for filing second term applications for grants and loans under the Students' Assistance Act.

Saturday, 12—

Last day of lectures in the first term.

Monday, 14 to Saturday, 19—

Mid-session examinations.\*

Tuesday, 15—

Last day for payment of second instalment of fees.

Monday, 21—

Second term lectures begin.

### **February—**

Friday, 8—

Last day for application for Graduate Degrees to be conferred at Spring Convocation.

### **March —**

Monday, 4 to Saturday, 9—Test Week\*

Saturday, 9—

Last day for receiving applications for supplemental examinations to be written in April.

## **April—**

Monday, 1—

Last day for receipt of applications for admission from new students, undergraduate or graduate, who wish to enter the University in the 1963 Summer Session.

Last day for receiving applications for first year medicine.

Friday, 12—

Good Friday: University buildings closed.

Friday, 19—

Last day for submission of theses by graduate students.

Saturday, 20—

Last day of lectures for students in Arts and Science, Commerce, Household Economics, Agriculture, Education, Engineering, Physical Education and Nursing.

Tuesday, 23—

Final examinations begin for students mentioned under April 20.

Tuesday, 30—

Survey School begins for first year Engineers.

Tuesday, 30—

Last day for registration of students in the Summer Session.

## **May—**

Friday, 3—

Last day for oral examinations for Masters and Doctoral candidates.

Thursday, 9—

Charter Day.

Wednesday, 15—

Notice of intention to be absent from Convocation must be given by 12 noon.

Wednesday, 15—

Last day for receiving applications for admission to Dentistry.

Thursday, 23—

Survey School ends.

Friday, 31—

Convocation for conferring of degrees, except in Dentistry and Medicine (to be held in Edmonton).

## **June—**

Tuesday, 4—

Last day for payment of 1963 Summer Session fees without penalty.

Sunday, 30—

University year ends.

\*Students will not be granted permission to leave the campus for extracurricular activities during test weeks.

## PART II

### *General Regulations*

*of the*

*University*



## 4—Admission (Procedures)

The courses of study in the University are, unless otherwise specified, open to men and women on equal terms.

**Enrolment in any faculty or school must necessarily be limited to the number of students who can be accommodated. Students are normally accepted in the order of their academic standing from among the whole list of applicants.**

### APPLICATIONS AND TRANSCRIPTS

Prospective students who have not previously attended the University of Alberta must obtain and complete Application for Admission forms and must submit them to the appropriate office **by the prescribed deadline**. Graduate students should obtain forms from the Dean of Graduate Studies. Alberta Grade XII students may obtain application forms and transcript order cards from the Principal or Counsellor of their high school. Other prospective applicants for admission to undergraduate programs may obtain forms from the Registrar of the University either at Edmonton or Calgary.

*Since the deadline for receipt of applications for admission to most undergraduate programs has been advanced to August 1, applicants should complete and return their applications before that date and should not wait to receive the results of departmental examinations before applying (see deadlines below).*

In addition, every applicant should arrange, **prior to the deadline**, for the Registrar of the University (or the Dean of Graduate Studies if he is applying for entrance to that Faculty) to receive two **official transcripts** of his previous education (high school and beyond), **to be sent direct from the Department of Education or other institution maintaining such records**. Alberta applicants should apply to the Examinations Branch **before August 1**, to have two transcripts of their high school record, including the June Departmental Examinations, sent to the University as soon as the results of these examinations become available.

### RESTRICTIONS

*Any applicant who, after the June examination, has deficiencies due to failures that would require him to write more than two Departmental Examinations in August to meet the admission requirements, will not be considered for admission in that same year. Moreover, any applicant who has had to write what the University considers to be an inordinate number of examinations because of failures and low marks, in order to attain the nominal entrance requirements of the University, may be refused admission on the ground that his chances for success at the University level are remote.*

1. Candidate for a master's degree:

### DEADLINES FOR APPLICATIONS

M.D. program .....	April 1
D.D.S. program .....	May 15
Law or Pharmacy .....	August 15
Graduate Studies .....	August 31
All other programs, including Evening Credit .....	August 1

### VISE FEE

A fee of \$5.00 is charged for the evaluation of educational documents issued in Canada but outside Alberta; the fee is \$10.00 for documents issued in other countries. Students entering the Faculty of Graduate Studies are exempt from vise fees.

### MEDICAL EXAMINATION

Every applicant for admission must have a medical examination and arrange for the results of the examination to be reported to the University, before his application will be regarded as complete. A medical examination report form will be supplied to each prospective applicant with his application form.

The applicant should present the medical report form to his own physician when he appears for his examination. This should be done before August 1, if possible, since all medical reports should be in the hands of the Director, Student Medical Services, by August 15 to ensure adequate time for review.

## ADVANCED STANDING

Students from other universities may be admitted to advanced standing except in the combined courses. Extramural credits from recognized universities may be accepted under certain conditions, but such credits will not be considered beyond the first year of university work. Students who have taken the equivalent of university courses in some other manner may be excused such courses but will not be granted advanced standing in them. They will be required to substitute other courses in order to complete a program of normal weight at this university.

All applications for such admissions should be addressed to the Registrar well in advance of the beginning of the session. Each application will be dealt with on its merits. The university reserves the right to require applicants for advanced standing to write examinations at any level including that of matriculation.

The amount of advanced standing that may be granted is limited by the residence requirements of the University of Alberta.

## CLASSIFICATION OF STUDENTS

Students are classified as graduates, undergraduates (full-time or part-time), specials, and auditors.

*Graduate Students* are admitted to the Faculty of Graduate Studies in one of the following categories:

1. *Candidate for a master's degree.*
2. *Provisional candidate for a doctor's degree:*  
All Ph.D. and Ed.D. students are classified as provisional candidates until they have passed their Candidacy Examinations.
3. *Probationary graduate student* is one whose university record is either: (a) difficult to assess (e.g. some foreign students) or (b) below the standard normally required.
4. *Conditional Graduate student* is one who is required to take undergraduate courses prerequisite to, and in addition to, the graduate program. Fees for such courses are not included in graduate program fees.
5. *Special graduate student* is one who wishes to take graduate courses for purposes other than degree credit at this university.

*Undergraduate Students* are those who possess full senior matriculation and who are taking one or more courses for credit towards an undergraduate degree. These students fall into two categories:

- (a) *Full-time students*—i.e. those who are registered in two-thirds or more of a full year's work.
- (b) *Part-time students*—i.e. those who are registered in less than two-thirds of a full year's work.

*Special Students* are those who, although registered in one or more courses, are currently neither seeking credit towards a degree or diploma, nor entrance into a graduate program.

*Auditors* are students who are registered in one or more other courses and who, having presented to the registrar written permission from an instructor to attend lectures in his course, are allowed to register in the course as auditors, on the understanding that this privilege permits them only to listen and not to participate in class discussions, assignments, or examinations.

## THE FACULTY OF GRADUATE STUDIES

The Faculty of Graduate Studies administers programs leading to the degrees of Master of Arts, Master of Education, Master of Science, Doctor of Philosophy, and Doctor of Education, and makes recommendations for granting the degrees of Doctor of Science and Doctor of Letters. Graduates who take courses in the University but are not at the time candidates for a degree are also enrolled in the faculty as "special graduate students."

Full details of regulations and programs of study will be found in the section of the calendar relating to the Faculty of Graduate Studies.

# 5—Registration

## REGISTRATION PROCEDURE

Students should consult the Academic Schedule at the front of this calendar for registration dates. Further necessary details will be supplied prior to registration.

Students are required for courses in which they are deficient before registering for other courses. The faculty councils reserve the right to adjust courses to meet the requirements of time-tables of lectures and examinations. The program of work for which a student seeks registration is in every case subject to the approval of the Registrar and the faculty concerned.

Graduate students carrying on full-time research or other academic work during the summer months may receive residence credit by registering with the Faculty of Graduate Studies for the whole, or a portion, of the period extending from the end of one regular winter session to the beginning of the next: this period is known as the Intersession. Application for such registration should be made as soon as the applicant's plans for this period are final.

**N.B.—A student is responsible for the completeness and accuracy of his registration. He is also responsible for any adjustment of registration made necessary by the results of supplemental examinations. Particular care should be exercised with regard to prerequisite courses. Registration in courses which directly conflict on the timetable will be allowed only when the permission of the Faculty Council concerned has been secured.**

## LATE REGISTRATION

Students are normally required to complete their registration, in person, by the date specified in the academic schedule (page 12). After the end of the registration period, registration will be permitted only in exceptional circumstances and with the payment of a penalty fee of \$3.00 plus \$1.00 per day. Where possible, application for late registration should be made to the Registrar in advance of the normal registration period.

## CHANGES IN REGISTRATION

A student may not abandon a course or change from one course to another without first obtaining permission from his Dean or Director. This permission in the form of a "Change of Registration" slip, signed by the Dean or Director must be presented to the Registrar before the change becomes official.

## CANCELLATION OF REGISTRATION

A student who wishes to withdraw from the University should report at once to the Student Counselling Services in order to complete Notice of Withdrawal forms. A student who withdraws without completing such forms will not be eligible for any refund of fees, nor for exemption from fees in the event that he has not paid them.

Registration is incomplete until fees have been paid and is subject to cancellation unless payment has been made by final date according to regulations as stated in section 10.



# 6—*Academic Regulations*

## EXAMINATIONS

### Term Examinations

(a) *First-year Courses:* In first-year course a definite mark for each student will be reported to the Registrar's Office at the close of the first term. This mark may be computed on the basis of one or more tests or essays or in any way that the instructor may consider satisfactory.

(b) *Senior Courses:* In senior courses the holding of term examinations is optional with the department concerned.

(c) *Distribution of Credits:* In each course where a final examination is held, credit of not less than 30% and not more than 70% will be assigned to term work. The remaining credit in each course will be assigned to the final examination. At the beginning of the session, announcement will be made by each instructor as to the procedure in each case and the distribution of credit.

(d) *Absence from term examinations or tests:* If a student has an unexcused absence from a term examination or test, the mark assigned to him will be zero. However, in case of illness the student may be excused from writing the examination or test. In applying for exemption a student must present a properly completed absence card signed by the Medical Services Officer. When exemption is granted the percentage allotted to the examination or test missed is added to the percentage allotted to the final examination.

(e) *Test Weeks:* Although instructors may give tests at any time at their discretion, one week in the middle of each term and one week between terms have been set aside as test weeks to assist in scheduling. During these weeks students will not be excused from classes for extra-curricular activities.

### Final Examinations

(a) *Final Examinations:* With certain exceptions, a final examination is held in each course. In courses completed in the first term, final examinations may be held either during the test week in January *under departmental supervision*, or at the end of the session, at the discretion of the departments concerned. All other final examinations are held at the end of the session.

(b) *Absence from Final Examinations:* Any student who is ill or suffering from severe domestic affliction is advised not to sit for a final examination. Instead he should advise the Registrar at once of the circumstances and should apply for a deferred final examination to be written at the time of the regular supplementals. Similar action should be taken by any student, who, because of religious convictions or for other cogent reasons, is unable to write a final examination at the scheduled time. Such application will be referred to the student's Dean or Director for a final decision.

If a student becomes ill or receives word of domestic affliction during the course of an examination, he should report at once to the Supervisor, hand in his unfinished paper and request that it be cancelled. Thereafter, if illness is the cause, he must go directly to the Medical Services Office so that any subsequent application for a deferred examination may be supported by a medical certificate. The Registrar should be notified of the circumstances in writing within 48 hours of the examination.

Should a student write an examination, hand in his paper for marking, and later report extenuating circumstances to support his request for cancellation of this paper and for another examination, such request will not be entertained.

(c) *Debarment from Final Examination:* A student may be refused permission to write final examinations in a course, on the recommendation of the Department concerned and with the concurrence of the Dean of his Faculty, in the following circumstances:

- (i) The student has an inordinate number of unexcused absences.
- (ii) The student has neglected to do a substantial proportion of his written assignments in a course of which these are an essential factor.
- (iii) The student has neglected to do a substantial portion of the laboratory work in a science course.

(d) *Appeals:* Final examination papers may be re-read on an appeal being made to the Registrar within thirty days after the publication of results, accompanied by a fee of \$10.00 for each paper; the fee will be refunded if the appeal is sustained—i.e. if the mark is raised from a failure to a pass, or from Class III to Class II. The appeal privilege is limited to two papers.

(e) *Aegrotat Standing:* Aegrotat standing may be granted by the Faculty Council concerned to a student registered in either of the last two years of any course, unless it be in the final year for the first degree in a combined course.

Any student wishing to take advantage of this privilege should apply without delay to the Dean of the faculty concerned. Any other student absent from a final examination because of illness may apply for permission to write the regular supplemental examination (see paragraph (b), above).

(f) *Statement of Record:* After the end of each University session a statement of record is mailed to each student at the home address specified on his registration. This should not be expected before June 15.

### **Supplemental and Deferred Final Examinations**

(a) *Supplemental Examinations:* Supplemental examinations are conducted by the University in September of each year (for exceptions, see following paragraph). A student granted the privilege of writing supplemental examinations must do so at the time of regular supplemental examinations next following or, if given special permission by the Dean, write the regular examinations next following. A student who has failed in a course in the preceding session and who has been granted a supplemental examination should apply to the Registrar not later than August 4, remitting the prescribed fee. Except under special circumstances, no student who has written final examinations will be permitted to sit for a supplemental examination unless he has attained an average of at least 50% on the year's work including the failed subject or subjects. In the faculties of Law, Medicine and Dentistry the average on the year's work must be at least 60%. Any student who returns to the University, having failed a supplemental examination or having neglected to write it, will be required to repeat the course. In certain cases an equivalent course may be prescribed instead of the failed course. The number of supplemental examinations allowed to any student is determined by the Faculty Council concerned. Notification of permission which may be granted to write one or more supplemental examination is included in the statement of marks sent to all students.

Supplemental examinations for Medical and Dental students in the latter part of August. Applications must be submitted to the Registrar at least thirty days before the examinations commence.

(b) *Distribution of Credit:* The percentage of term marks carried forward to a supplemental examination will be determined by the Department and Faculty concerned.

(c) *Graduating Students:* In the Faculties of Arts and Science, Agriculture, Commerce, Education, and in the Schools of Household Economics, and Physical Education, second-class standing is required in a specified number of subjects. This is also

the case in the degree course in Medical Laboratory Science. Regulations governing the writing of supplemental examinations to obtain such standing are laid down by these faculties and schools in their own calendars. Subsequent to the degree examinations a member of the graduating class, who having exhausted all the regular supplemental examination privileges, has still a failure in one course only, may, with permission of the faculty concerned, register in and repeat that course extramurally unless in the opinion of the department concerned a second attendance is necessary. A graduating student who is absent on account of illness from, or who fails in a first term final examination may be allowed a supplemental examination at the end of the session; applications for such examination must be made not later than March 3.

(d) *Deferred Final Examinations:* A student who has missed a final examination because of illness or domestic affliction or who is obliged to absent himself from examination for some other compelling reason (including religious convictions) may apply for a deferred final examination to be written at the time of the regular supplemental examinations (see section (b) under Final Examinations). A student in the Faculty of Medicine, Dentistry or Law who cannot take a first term final examination because of illness will be granted a deferred final examination at the end of the session. This regulation also applies to graduating students. (See section (c) above). Application for such examination must be made not later than March 3 and must be supported by a satisfactory medical certificate.

(e) *Absence from Supplemental or Deferred Final Examinations:* Special supplemental and special deferred final examinations may be granted to students who are prevented by illness (attested by a physician), domestic affliction or other extreme circumstances from writing at the regular time.

(f) *Special Supplemental and Special Deferred Final Examinations:* Special supplemental and special deferred final examinations may be written in October (See Academic Schedule for date). In certain approved cases they may be written during the regular examination periods in March, April, July or August. In each case, application must be made a full month before the examination is to be written.

## EXAMINATION RESULTS

After the examination papers have been marked and the final results computed, they must be reviewed by the faculties and recorded in the permanent records before an individual statement can be sent to each student. As this process is time-consuming, students should not expect to receive their statements of marks until about June 15.

## DEGREES IN ABSENTIA

Graduands who are unable to be present at Convocation are required to give notice in writing of their intention to be absent. This notice must be received by the Registrar by the date and hour indicated in the Academic Schedule. Any student who fails to give notice as required will be assessed a penalty of \$10.00 prior to release of his or her parchment. A graduand may be excused from the payment of this fee if his absence without notice is due to sudden illness, accident, domestic affliction or other reason deemed valid by the Registrar.



## GRADING SYSTEM

Students' marks are graded as follow: 80% and over, Class I; 65% to 79%, Class II; 50% to 64%, Class III. For students proceeding toward an undergraduate degree the pass mark is 50% unless otherwise specified; in courses taken toward a graduate degree the pass mark is 65%.

## ACADEMIC HONORS

### First-Class Standing

First-class standing in a given year is awarded to any student who secures an average mark of not less than 80% in the work of that year.

### First-Class General Standing

Up to and including the 1960-61 session first-class general standing was awarded to, and inscribed upon the degree parchment of, any student who secured first-class standing in the year specified in the following schedule:

<i>Degree</i>	<i>Qualifying Period</i>
B.A., or B.Sc. (Arts) or B.Com.	Years I, II and III of the general course.
B.Sc. (H.Ec.)	Years I, II and III.
B.A. in B.A., LL.B. course	Arts and Science I and II, Law I.
B.A. in B.A., B.Sc. (Engineering course)	Years I, II and III.
B.A. in B.A., B.Com. course	Years I, II and III.
B.Com. in B.A., B.Com. course	Years III, IV and V.
D.D.S.	Any three years, and an average of 80% or more during the four years of the program.
M.D.	As for D.D.S.
B.Ed. and B.P.E.	Any two years, and an average of 80% or more during the last three years of the B.Ed. program (two and one-half years for the old high school program) or during all three years of the B.P.E. program.
LL.B.	Years I, II and III of Law.
B.Sc. (Nursing)	Years I and V and an average of 80% or more in II, III and IV.
B.Sc. (Pharmacy)	Years I, II and III.

## **DEGREES WITH HONORS**

### **The Faculty of Arts and Science**

A student with approved qualifications may proceed to the degree of Bachelor of Arts or Bachelor of Science with honors by following a more concentrated course of study in a special field under the supervision of one of the departments.

The time required for an honors degree is four years from senior matriculation. A student may apply for admission to an honors course at the beginning of either the first or second year, but formal admission to honors comes at the beginning of the second year.

Honors degrees are awarded in two classes, first-class honors and honors. For first-class honors, an average of 80% is required; for honors, 65%. In awarding honors, the entire university record of the student is considered.

## **DEGREES WITH DISTINCTION**

Beginning in 1962, the notation "With Distinction" will be inscribed on the permanent record and graduation parchment of a candidate for any degree, except an Honors or Graduate degree, if the candidate has obtained a weighted average of 80% or higher over the last two years of his program.

A student who has taken part of his work at another university may be granted a degree "With Distinction" at the discretion of the Faculty concerned.

## **RESIDENCE REQUIREMENTS**

A student proceeding towards a first degree will normally be required to attend at least one academic year as a full-time student.

## **PROMOTION REGULATIONS**

Full details of special promotion regulations of the various faculties and schools will be found in pages relating to the faculty or school.

## **UNSATISFACTORY STANDING**

A freshman student whose matriculation record is weak may be warned of this fact at the outset of the session. A freshman student whose record in this first term is deemed unsatisfactory will be so notified by his Dean or Director. Appropriate steps will be taken to assist the student to improve his standing.

The records of all students in the University are reviewed at the end of each session. A student whose record is then unsatisfactory will be notified by his Dean or Director and will be referred to Student Counselling Services for re-counselling. He may be denied supplemental examinations and may be required to repeat his year.

A student whose record is extremely unsatisfactory may be required to withdraw from the University and in any event will not be permitted to re-enter without re-counselling. Such a student who seeks re-admission to the University must report his intention by letter or in person to the Director, Student Counselling Services, not later than August 1st.

A student with an extremely unsatisfactory record at another University will not be considered for admission until at least a year has elapsed from the date of his leaving that institution. Thereafter, the procedure outlined above will apply.

**The General Faculty Council may refuse permission to a student or prospective student to enter any year of any course if, in the opinion of the Council, the student shows a lack of general educational attainment. Further, a student whose record in the classroom, in tests, or in final examinations is unsatisfactory, may at any time be required to withdraw from the University.**

## RELATION OF SCHOLASTIC STANDING TO EXTRACURRICULAR ACTIVITIES

To be eligible (1) to represent the University in any competition with outside organizations, (2) to participate in non-competitive University activities which are open to the general public, or (3) to hold office in a student organization, a student must be a bona-fide student, and meet the requirements of *satisfactory scholastic standing*.

Bona-fide students are:

- (i) students doing full undergraduate work in the University; or
- (ii) graduate students in attendance carrying a full year's work leading to a degree; or
- (iii) students in affiliated colleges carrying a full year's work leading to a diploma or certificate and taking two full courses of University grade in the University.

Bona-fide students may assume that they are scholastically eligible to participate in the activities listed above unless they are informed otherwise by their Deans or Directors. However, men students desiring to participate in events sponsored by the Western Canadian Intercollegiate Athletic Union, must meet the requirements of scholastic standing laid down by that body.

If a student feels at any time that there are circumstances which might have a bearing on his eligibility to participate, he should consult the Dean of his faculty or the Director of his school as soon as possible and explain these circumstances to him.

## APPEALS

A student may present an appeal to the respective Council or Administrative Committee concerned through the Dean or Director.

The General Faculty Council has power to hear and determine appeals from the decisions of the Faculty Council upon application by members or by students and others. Such appeals should be addressed to the Registrar.

## ATTENDANCE

- (a) Regular attendance is expected of students in all courses. Students having an inordinate number of unexcused absences from a course may be refused permission to take the final examination.
- (b) Absences are counted from the first day of the session.
- (c) Students who are late for any lecture or laboratory period will be marked absent unless at the end of the period in question they account satisfactorily to the instructor for their lateness.
- (d) Illness and Physical Disability:
  - (1) Students who are absent from two or more consecutive classes in a course because of illness or disability should report to their instructor upon their return to class. If the instructor requires an absence card, it will be the student's responsibility to have one certified by the Infirmary Physician, and to show it to the instructor before depositing it with the Registrar.
  - (2) Absence from term or final examination—see paragraph (d) top page 19 and paragraph (b) lower page 19.
- (e) Students who are absent from two or more consecutive classes in a course for some valid reason other than illness should report to their instructor upon their return to class. If the instructor requires an absence card, it will be the student's responsibility to have one signed by the Registrar and to show it to the instructor before depositing it with the Registrar.



- (f) Students desiring leave of absence in any given course must communicate their desire to the Registrar. At the end of such a period of absence, the student must present an absence card for the Registrar's signature.

## **STUDENT CONDUCT AND DISCIPLINE**

When a student enters the University, it is expected that he will apply himself to his studies and conduct himself with propriety. Should a student fail to live up to these expectations, the University reserves the right to take such action as, in its opinion, his case warrants. The penalty of expulsion may be applied.

### **1.—The Deans' Council**

Although the Senate exercises jurisdiction in a general way over the conduct of students in attendance at the University, the actual day-by-day administration of students discipline is vested in the Dean's Council, and in those persons and bodies to which its authority has been delegated.

### **2.—The Provost, the Dean of Women, and the Advisor to Men Students**

The Provost of the University exercises general supervision over the conduct and welfare of the students. He is Secretary of the Deans' Council and of the Committee on Student Affairs, and Chairman of the General Residence Committee. He works in co-operation with the Dean of Women and the Advisor to Men Students. (In Calgary the Provost is represented by an Advisor to Men Students and the Dean of Women is represented by the Advisor to Women Students).

### **3.—The Disciplinary Committee of the Students' Union**

The Students' Union is concerned with all matters of discipline and is, as a matter of policy, given the first opportunity to deal with any disciplinary issue that may arise. For this purpose it has set up a Disciplinary Committee.

## **SPECIAL REGULATIONS OF THE BOARD OF GOVERNORS**

(a) All interference on the part of any student with the personal liberty of another or any conduct on the part of any student subjecting another student to any indignity or personal violence is forbidden. No initiation ceremony involving physical violence, hazing, personal indignity, interference with personal liberty or destruction of property may be held within the buildings or on the grounds of the University, such student activities being expressly forbidden under penalty of suspension or expulsion.

The University authorities will not be responsible for any accident or illness of any kind occasioned to any student while engaged in or being subjected to any such activities.

(b) In the case of dishonesty or any serious indiscipline in the classroom, the instructor has the authority of suspension from the classroom. Further action is to be taken by a committee consisting of the Provost and the department and Dean concerned.

(c) The use of, bringing or having of liquor on University premises, is strictly prohibited.

## 7—Student Services

### STUDENT COUNSELLING SERVICES

This is a counselling service staffed by professionally trained counsellors for university students and for prospective students. Operate throughout the year.

*Prospective students* write or come in regarding choice of university program and vocational planning. Appointments should be arranged in the second term of the Grade XII year or during the following summer. The bulletin "Information for Prospective University Students" has been prepared to answer questions commonly asked.

*University students* make use of the service regarding choice of program, vocational planning, personal matters and progress with studies.

- (1) *Testing Service.* A few basic tests are given to all incoming freshmen at the time of registration. Vocational inventories and other individual tests are given when it appears that these may be helpful to the student.
- (2) *Study Skills.* A series of study tutorials is arranged each session for new students.
- (3) *Vocational Planning.* Students often consult about future plans, including further possible professional training.
- (4) *Student Housing Service.* See Calendar page 29 for living accommodation.
- (5) *Financial Aid.* The counsellor in Calgary acts for the Administrator of Student Awards in all matters concerning financial aid.
- (6) *Personal Problems.* Occasionally a student's performance suffers because of worry, restlessness, inability to concentrate, or pre-occupation with personal problems. In these circumstances, the student should consult a counsellor as soon as possible.
- (7) *Change of Faculty.* Students contemplating a change of School or Faculty are advised to consult a counsellor. This should be done well before the opening of the session.
- (8) *Withdrawal from the University.* Any student who for any reason is contemplating withdrawal from the University should immediately arrange an interview with a counsellor.
- (9) *Unsatisfactory Standing.* Re-counselling is advised and, in the case of extremely poor standing, is required.

### STUDENT MEDICAL SERVICES

A Student Medical Services Fund is maintained by an annual appropriation from fee revenue. This trust fund is administered by a committee consisting of a Chairman, the Director of Medical Services, the Business Offices, the Director of Student Counselling Services, the President of the Students' Union, the President of the Wauneita Society and the Treasurer of the Students' Union. All undergraduate students are entitled to medical treatment under such conditions and provisions as have been outlined in specially printed pamphlets, copies of which will be furnished to students on payment of fees. Every student should read these instructions carefully. There is no infirmary on the Calgary campus, but a Medical Services office is maintained.

## PHYSICAL EDUCATION SERVICE PROGRAM

It is the aim of the School of Physical Education to make a major contribution toward the physical, mental and social life of each student through instruction and participation in physical and recreational activities.

All first-year students are required to take two hours of physical education per week. Those excepted from this regulation are:

1. Students declared physically unfit by the University Medical Services;
2. Students over 25 years of age.

Individual lockers, locks, towels and shower facilities are available for all students. The program is conducted in the University Gymnasium.

The prescribed gymnasium costume is:

Women:

Shorts (dark green)

T-shirt (white)

Socks (white)

Running shoes (white)

Men:

Shorts

T-shirt

Running shoes

Shorts and T-shirts may be purchased at the University Bookstore.

## NATIONAL EMPLOYMENT SERVICE STUDENT PLACEMENT

A National Employment Service Office is operated to help students find permanent or summer jobs. The Office is happy to advise or assist students at any time without obligation. Students who wish summer jobs are advised to register well before the end of the spring term. Those graduating should register at the beginning of the year because employer interviews begin in the early fall and continue throughout the session.

## STUDENT HOUSING SERVICE

While the University authorities cannot accept responsibility for finding suitable accommodation for students, they are anxious to give whatever assistance they can in the matter. A special service in this regard has been provided. Lists of available accommodation may be consulted in the General Office.

The University Cafeteria provides a full meal and restaurant service for the convenience of students.

## AWARDS AND FINANCIAL ASSISTANCE

Awards and arrangements regarding various forms of financial assistance are listed in Section 12 of this Calendar. Enquiries should be addressed to the Student Counselling Services Office, University of Alberta, Calgary, or to the Administrator of Student Awards, University of Alberta, Edmonton.

## THE BOOKSTORE

For the convenience of students, the University maintains bookstores in Edmonton and in Calgary where textbooks prescribed in the university calendar may be obtained. Stationery, drawing materials, gymnasium wear and other accessories are also available at special student prices.

## RAILWAY RATES

Students attending University are entitled to reduced fares and should apply to their local ticket agents for special student tickets. These tickets must be countersigned by the Business Officer for the return journey at the end of the session.

## STUDENT GOVERNMENT

A long-standing duty and prerogative of the University Senate has been to make provision for student self-government on the campus.

To this end it established a Committee on Student Affairs in 1911. A similar committee was formed for Calgary in 1950.

The Committee on Student Affairs ratifies the Constitution of the Students' Union and receives twice yearly reports on the Union's activities. All registered students become members of the Students' Union on payment of their general fees.

Besides authorizing the activities of the Students' Union, the Committee on Student Affairs interests itself in student extracurricular life in general.

In Edmonton students in residence elect members to a General Residence Committee with subcommittees for matters relating solely to the men and women students. Originally under the direct control of the Board of Governors, the General Residence Committee has since 1942 been a standing committee appointed by the Deans' Council.

### **THE INTRAMURAL SPORTS PROGRAM**

The School of Physical Education, with the co-operation of the University Athletic Board, organizes and administers a comprehensive program of intramural sports. A primary purpose of the program is to encourage sportsmanship and friendly relations among the students of the University through athletic competition. Individual and group competitive sports for men and women include tennis, golf, track and field, cross-country running, basketball, hockey, volleyball, touch football, table tennis, swimming and figure skating. Facilities include gymnasiums, swimming pool, ice arena and outdoor playing fields.

### **INTERCOLLEGIATE ATHLETICS**

As a member of the Western Canada Intercollegiate Athletic Union, the University provides opportunities for men and women to compete in intercollegiate sports. Included in the activities for men are golf, tennis, cross-country, badminton, volleyball, basketball, hockey, wrestling, swimming and curling. Women compete in tennis, golf and badminton and hold two sports weekends with member universities. Basketball and curling are played during one weekend and volleyball, swimming and figure skating during the other.



## PART III

### *Programs of Study*

# 8—Outline of Programs

## EDMONTON AND CALGARY

Faculty or School	Degree or Diploma	Years required (after senior matriculation unless otherwise shown) to complete course	Years of course offered	
			Edmonton	Calgary
Arts and Science -----	B.A.	3	all	all*
	B.Sc.	3	"	all*
	B.Mus.	3	"	1, 2
	B.A. Honors	4	"	1
	B.Sc. Honors	4	"	1
	Dip. in Art.	4	"	0
	(Intermed. Dip. in Art)	2	"	0
Commerce -----	B.Com.	4	"	2
Household Economics -----	B.Sc.	3	"	1
Agriculture -----	B.Sc.	4 (see matriculation requirements)	"	1
Engineering (Civil, Chemical, Electrical, Mechanical, Metallurgical, Mining, Eng. Physics) -----	B.Sc.	4	"	1, 2
(with Arts and Sci.) -----	B.A., B.Sc.	6	"	1, 2
Dentistry -----	D.D.S.	4 (after pre-Dental year)	"	pre-dent. only
	Dental Aux. Diploma	2	"	0
Education -----	B.Ed.	4	"	all
	B.Ed. in Industrial Arts	4	4th year only	all
Law -----	LL.B.	3 (after B.A.)	all	0
(with Arts and Sci.) -----	B.A., LL.B.	5	"	1, 2
Medicine -----	M.D.	4 (after 2 pre-Med. years)	"	0
	B.Sc.	1 (see Med. calendar)	"	0

\* In the third year, choices of programs and courses will be restricted.

# OUTLINE OF PROGRAM

## EDMONTON AND CALGARY (Continued)

Faculty or School	Degree or Diploma	Years required (after senior matriculation unless otherwise shown) to complete course	Years of course offered	
			Edmonton	Calgary
Nursing -----	B.Sc. in Med. Laboratory Sci.	3	all	0
	B.Sc.	5	"	1
	Dip. Public Health	1 (after hospital graduation)	"	0
Physical Therapy ----- and Occupational Therapy -----	Dip. Teaching-Supervision	1 (after hospital graduation)	"	0
	Diploma	3	"	0
Pharmacy -----	Diploma	3	"	0
	B.Sc.	3	"	0
Physical Education -----	B.Sc. Honors	4	"	0
	B.P.E.	3	"	1
Graduate Studies -----	M.A., M.Ed., M.Sc., Ph.D., Ed.D.	see Graduate Studies Calendar	"	depends on field of study
Committee on degree of Bachelor of Divinity -----	B.D.	see Arts and Science Calendar	"	0

### EVENING CREDIT PROGRAM

Through its evening Credit Program, the University offers credit courses at various centres in the evening and on Saturdays for the convenience of persons employed during the day. For details of the courses, fees, and regulations, see the Evening Credit Program Announcement.

### SUMMER SESSION

The University conducts a Summer Session annually. Established primarily to meet the needs of teachers, the Summer Session provides a variety of courses for the convenience of candidates for various degrees who are unable to attend the regular sessions. Courses are offered also for students interested in special fields and for students entering upon degree work who are deficient in certain matriculation subjects. For details of courses, fees, and regulations, see the Summer Session Announcement.

# 9—Admission Requirements

FACULTY OR SCHOOL	PROGRAM	SUBJECTS OF ALBERTA GRADE XII (Senior Matriculation) REQUIRED FOR ADMISSION (with average of at least 60%)							REMARKS
		English 30	Social Studies 30	Maths. 30	Maths. 31 *	Chem. 30	Phys. 30	Biol. 32	French 30 Latin 30
Arts and Science	B.A., LL.B. B.Mus. Dipl. in Art	C C C	C C C	C C C	C C C	O O O	O O O	O O O	CO CO CO
	B.Sc. (Biological) B.Sc. (Physical)	C C	C C	C C	C C	O O	O O	O O	C C
	Pre-Dentistry	C	C	C	C	C	C		C
Agriculture	B.Sc.	C	C	C	C	C	O	O	O
Commerce	B.Com.	C	C	C		O	O	O	O
Dentistry	D.D.S. Dental Auxiliary Diploma	C C	C C	C O	C	C	C	O	C
Education	B.Ed.	C	C	O		O	O	O	OOO

4 compulsory; 2 options. Either two sciences or two languages are required. For B.Mus. matriculants must also have completed Western Board of Music Grade VIII practical and Grades IV and V theoretical examinations.

4 compulsory; 2 options.  
5 compulsory; 2 options (Chemistry 30 and Physics 30 are required for the patterns; Chemistry, Geology and Physics recommended for the others).  
6 compulsory.

4 compulsory, 2 options (Physics recommended). Admission will also be granted on basis of Diploma from Provincial School of Agriculture provided applicant possesses certain Grade XI and XII credits.

3 compulsory; 3 options.

The foregoing plus completion of the Pre-dental yr. req'd. for adm.  
3 compulsory; 3 options (Math. 30 recommended).

2 compulsory; 4 options. (Math 31 is acceptable only if taken in 1961/62 or subsequently). Candidates intending to major in Household Economics should have Chemistry 30. Those intending to major in mathematics should have Mathematics 30 and 31. Music 30 is acceptable as one of the options.



Engineering	B.Sc.	C	C	C	C	C	C	C	C	7 compulsory. Students presenting Chem. 30 without approved lab will have to satisfy Dept. of Chem. as to their proficiency in lab.
Household Economics	B.Sc.	C	C	C	C	C	C	C	C	5 compulsory: 1 option (Physics is recommended).
Law	LL.B.									Either a B.A. (or equivalent degree) or completion of the first two years of the B.A., LL.B. program is required for admission to Law.
Medicine	M.D.									Satisfactory completion of at least 2 years of university work after senior matriculation including full course in inorganic chem., organic chem., physics and zoology is required for admission.
	B.Sc. in Medical Lab. Science	C	C	C	C	C	C	C	O	4 compulsory: 2 options.
Nursing	B.Sc. or Dipl. in Public Health or Teaching and Supervision	C	C	O	C	O	C	O	O	3 compulsory: 3 options.
Pharmacy	B.Sc.	C	C	C	C	C	C	O	O	4 compulsory: 2 options (Physics is recommended).
Physical Education	B.P.E.	C	C	O	C	O	C	O	OOO	3 compulsory: 3 options (Biology is recommended).
Physical Therapy and Occupational Therapy	Diploma Diploma	C	C	C	C	C	C	C	O	5 compulsory: 1 option.

NOTES: (1) In above columns "C" denotes a compulsory subject, "O" an option. The minimum acceptable mark is 50%, the average 60%.

(2) An Alberta High School Diploma is normally required.

(3) Matriculants from other provinces or countries holding equivalent standing will be deemed admissible.

(4) Social Studies (or History) will not be required of matriculants from outside Alberta or Saskatchewan.

(5) Further details may be found in the faculty sections of the calendar.

\*Mathematics 31 mark not counted in computing required average unless departmental examination was written in 1962 or subsequently.

**These general regulations notwithstanding, the University may in its discretion refuse admission to any applicant. For example, this regulation normally will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal entrance requirements of the University.**

# 10—Schedule of Fees

(Make all cheques payable **at par** to **University of Alberta.**)

The University reserves to itself the right to change these fees from year to year without notice.

Registration is incomplete until fees have been paid and is subject to cancellation unless payment has been made by final date according to regulations as stated in the section, "Payment of Fees."

When a student withdraws with the approval of his Dean an adjustment will be made on a pro rata basis except that no refunds will be made where withdrawal or cancellation is subsequent to March 31. In the case of a full-time undergraduate student an administrative charge of \$10 will be made. In any other case the administrative charge will be the amount of the registration fee.

The following special fees are applicable to all faculties and will be assessed in particular cases as they apply:

For vising certificates (Not applicable in Graduate Studies.)

Canadian: ..... \$ 5.00

Others ..... 10.00

For transcript of record ..... 1.00

For supplemental examinations, each subject ..... \$ 10.00

For special supplemental examinations, each subject ..... 15.00

For summer reading courses in languages ..... 5.00

Late registration ..... \$3.00+\$1.00 per day

## UNDERGRADUATE PROGRAMS

### 1. Full-time Students

#### General Fees

Student's Union:	Edmonton	Calgary
General .....	\$12.50	\$16.50
General .....	15.00	6.00
University Athletic Board .....	7.00	7.00
	<u>\$34.50</u>	<u>\$29.50</u>

Students will be assessed for extraordinary damage to furniture, apparatus, books, etc. Invoices will be submitted when necessary and must be paid before credit will be given for examinations.

#### Instruction Fees

##### Faculty of Arts and Science:

(a) B.A.:	
Per session .....	\$250.00
(b) B.Mus.:	
Per session .....	250.00
(c) B.Sc.:	
Per session .....	290.00
(d) Diploma in Art:	
Per session .....	250.00

##### Faculty of Agriculture:

Per session .....	290.00
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##### School of Commerce:

Per session .....	290.00
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##### Faculty of Dentistry:

(a) Pre-dental course (Arts and Science), first or second year:	
Per session .....	290.00
(b) Faculty of Dentistry:	
Per session .....	425.00

##### Faculty of Education:

Per session .....	250.00
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# SCHEDULE OF FEES

35

<i>Faculty of Engineering:</i>		
Per session .....		340.00
<i>Arts and Engineering:</i>		
Per session, first, second and third years .....		290.00
Per session, subsequent years .....		340.00
<i>School and Household Economics:</i>		
B.Sc., in H.E.:		
Per session .....		\$290.00
<i>School of Nursing:</i>		
(a) Degree course:		
Per session .....		290.00
Per session, intermediate years .....		Gratis
Per session, final .....		290.00
For General Fees, see Section VII of the Nursing Calendar.		
<i>School of Physical Education:</i>		
Per session .....		250.00

## SCHEDULE OF FEES

### II—Part-time Students

	1 Course	2 Courses	3 Courses
Registration .....	\$ 2.00	\$ 2.00	\$ 2.00
Medical Services* .....	—	—	12.00
Students Union .....	—	9.00	22.50
University Athletic Board** .....	7.00	7.00	7.00

\*Optional at registration (not available for students taking less than 3 courses).

\*\*Optional at registration.

### Instruction Fees

	Full Course	Half Course
Arts and Science .....	\$65.00	\$35.00
Education .....	65.00	35.00
Commerce .....	65.00	35.00
Household Economics .....	65.00	35.00
Auditor .....	12.00	6.00

In all other school and faculties the fee assessments will be based upon the proportion the hours of instruction in the courses taken bear to the total number of hours of instruction in a normal year's work in the faculty concerned. For the purpose of assessment of fees, students who are taking two-thirds or more of a full year's work will be treated as full time students. In no case will the total fees assessed any special or partial student exceed the total fee for a normal year's work, nor will the minimum assessment for tuition for one full course be less than \$65.00.

## GRADUATE PROGRAMS

*Faculty of Graduate Studies:*

### General Fees

Registration .....	\$ 8.00
Medical services, optional at registration .....	12.00
Students' Union and University Athletic Board, optional at registration .....	29.50

### Instruction Fees

Students who have already started masters' programs will note that the method of assessing fees has been changed. Assessment of fee balances under the new system will not change the total fee for any student who completes his program in the normal time.

### Full-time Students:

Except where otherwise noted, each fee quoted in the following schedule is the current total instruction fee for the minimum period during which it is possible to complete the degree program. The University reserves the right to change fees without notice. Students who have not completed their programs when a change is made will pay at the new rate for the balance of their programs.

## SCHEDULE OF FEES

D.Sc. or D.Litt. degree .....	\$250.00
Ph.D. or Ed.D. degrees (Holders of Master's Degree) \$250.00 a year for two years .....	500.00
Ph.D. or Ed.D. degrees (Holders of Bachelor's Degree) \$250.00 a year for three years .....	750.00
Masters degrees (Holders of Bachelor's degree with honors or of the B.Sc. degree from a four-year undergraduate program). One year at	250.00
Masters degrees (Holders of the B.Ed. degree or of any Bachelor's degree from a three-year undergraduate program). One year at \$250.00 and one at \$125.00 .....	375.00
Master of Education degrees for which residence credit is obtained at Summer Session, Three Sessions at \$125.00 .....	375.00
Subsequent years for all doctoral and masters candidates:	
Extramural .....	15.00
Intramural .....	30.00

Special and provisional graduate students taking courses other than those credited toward a degree program will be assessed \$65.00 per full course and \$35.00 per half course to a maximum of the fee for a full year's program of senior work in the appropriate faculty.

## SCHEDULE OF FEES

*Part-time Students:*

Part-time students in all categories will be assessed \$65.00 per full course and \$35.00 per half course up to the amount of the total instruction fee for the full program. Part-time students shall be subject to an extra assessment of \$15.00 (extramural) or \$30.00 (intramural) for each registration in excess of three. Any outstanding balance will be assessed in the student's final session.

*Committee on Degree of Bachelor of Divinity:*

Registration .....	\$ 5.00
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**For Summer Session fees, see Summer Session Calendar.**

## PAYMENT OF FEES

Fees are due and payable immediately after registration. During the registration period and up to October 15th, a special deposit box is provided in the Arts and Education Building for payment of fees by cheque. The fee card stub must be presented with payment or enclosed if payment is made by mail or through the deposit box. The fee card stub will be returned to the student along with a cash register receipt. All cheques should be payable at par to the University of Alberta.

If fees are to be paid from some form of students' assistance it is the responsibility of the student to so advise the Cashier and to produce a letter from the source of the assistance as confirmation. This must be done before the deadline for payment of fees to avoid the penalty. In the case of Province of Alberta assistance it may not be possible to produce a letter before the deadline. In any case, the Cashier must be advised of the application for assistance.

Regulations regarding payment of fees:

## 1. Undergraduate students:

- Fees are due and payable immediately after registration. If desired, payment may be made in two instalments, in which case an additional charge of \$3.00 will be added to the second instalment except in the Faculties of Medicine and Dentistry, where the charge will be \$5.00. The first instalment consists of full General fees and approximately 60% of the Instruction Fee. (Instalment privileges are not available to students taking less than two full daytime courses).



- (b) The last day for payment of fees is October 15th. If paying in two instalments the last date for payment of the first instalment is October 15th; the second instalment—January 15th. A penalty of \$5.00 will be charged on any payments made or postmarked after these dates. In addition, if payment has not been made by October 31st for first-term fees and January 31st for second-term fees, registration will be subject to cancellation and the student will be excluded from classes. A re-assessment of fees will be made to the date of cancellation and the amount unpaid entered on the student's record. Future registrations will not be accepted until the account has been settled.
  - (c) Where a student is permitted to register late, the last date for payment of fees will be fifteen days after the date of assessment. A penalty of \$5.00 will be charged for any payment after this date.
2. Graduate students:  
The same regulations apply with the following changes:
- (a) The last date for payment of fees is fifteen days after the date of assessment, as shown on the fee card stub.
  - (b) Instalment payment privileges are not normally available. However, arrangements can be made with the Fee Clerk in the Bursar's Office to pay in two instalments if the fees exceed \$100.00.
3. Extramural students:
- (a) Registration will not be accepted unless accompanied by the registration fee of \$2.00 (\$8.00 for graduate students) which is not refundable. Full fees are payable on assessment and if not paid as at November 30, registration will be cancelled.
  - (b) If notice of withdrawal is received by the Registrar by November 30, all fees except the registration fee will be refunded. If notice of withdrawal is received by the Registrar subsequent to November 30, a *pro rata* charge from October 16 is made and the balance refunded except that no refunds will be made where withdrawal or cancellation is subsequent to March 31.
  - (c) A registration may not be carried over from one session to another session. If a student, for any reason other than illness, does not write his examination at the regular time, all fees are forfeited, and in order to be admitted to another examination in that course he must register in another session and pay the full fees. Deferred final examinations may be granted only on the basis of illness verified by a doctor's certificate and must be written at the time of the next regular University examination period.

## EXAMINATION FEES

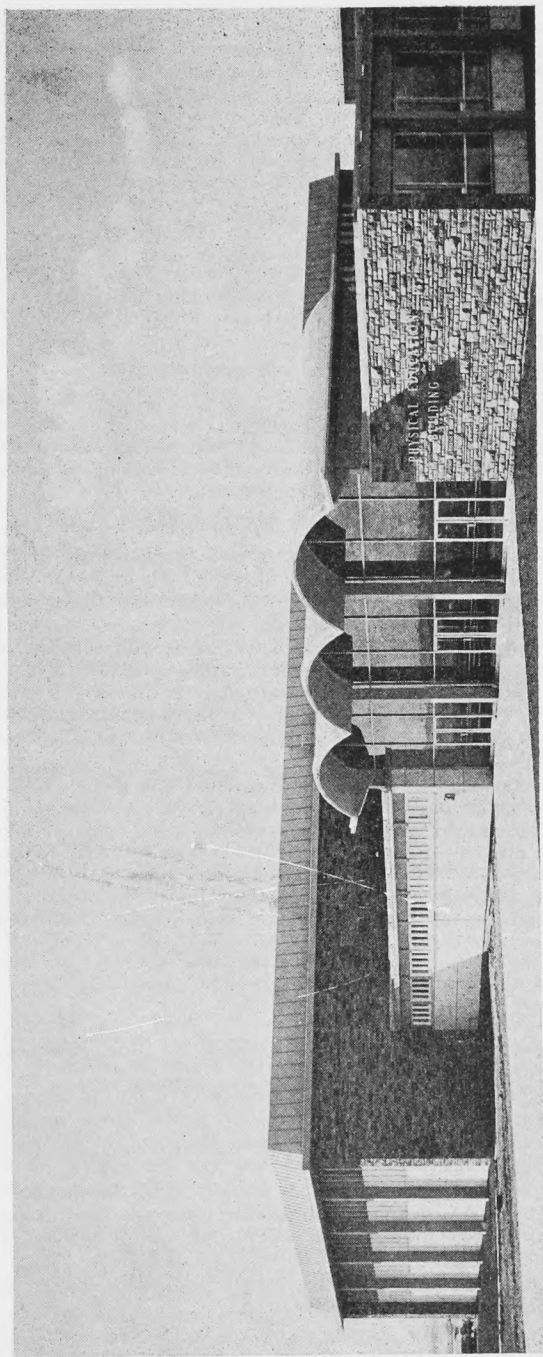
(a) *Final Examinations:* No fee is levied for final examinations written during regular examination periods.

(b) *Supplemental Examinations:* A fee of \$10.00 is charged for each supplemental examination written during a regular supplemental examination period. Applications for September examinations received after August 10 must be accompanied by an additional fee of \$5.00 and may not necessarily be accepted.

(c) *Deferred Final Examinations:* A fee of \$5.00 is charged for each deferred final written during regular supplemental examination periods. The fee for special deferred finals requiring the setting of special papers is \$10.00 per paper.

(d) *Special Supplemental Examinations:* For special supplemental examinations a fee of \$15.00 is charged for each subject.

(e) *Outside Centres:* An additional fee of \$5.00 per subject is charged for writing supplemental examinations in established Alberta centres other than Edmonton and Calgary.



"THE UNIVERSITY PHYSICAL EDUCATION BUILDING"

### PART III,

## 11 Curriculum Outline

# *A—The Faculty of Arts and Science*

## **MATRICULATION**

The examinations for admission to the University of Alberta are the regular Alberta Grade XII Departmental Examinations held each year in June and August. Applications for these examinations should be made about two months before the date of the examinations, to the **Chairman of the High School and University Matriculation Examinations Board, Department of Education, Administration Building, Edmonton.**

Students whose matriculation has not been completed in the June examinations are urged to attend the Red Deer Summer Session operated by the Correspondence School Branch of the Department of Education, and to remove their deficiencies by writing the Grade XII supplemental examinations in August. High School students who are unable to obtain instruction in all the subjects of matriculation at their local High School are advised to register for such courses with the Correspondence School Branch in Edmonton, as soon as possible after the commencement of their final High School year.

Certain courses at the Grade XII level, normally offered to students who are beginning their study of a particular subject, sometimes may be taken at the university for the purpose of removing a matriculation deficiency. With the consent of the Dean, students with good High School records may be allowed to take **one** such course. They must satisfy the general matriculation requirements in every other respect, and present evidence that the matriculation course needed for University entrance was not available in their school. When taken for this purpose, such a course will not count toward a University degree.

Students of mature age whose high school preparation has not been regular may in certain circumstances be excused from presenting a high school diploma. Such students should apply to the Registrar for specific information.

Students who have completed matriculation in accordance with the requirements set forth in previous calendars should submit their credits for evaluation.

Students seeking credit for matriculation courses taken outside Alberta should submit their documents to the Registrar of the University for evaluation. A fee of five dollars is charged for this service if the documents are issued in Canada, and ten dollars if issued in other countries. The University reserves the right to prescribe additional examinations where there is doubt about such credits.

## **General Requirements**

Students from the high schools of Alberta seeking admission to the University must possess—

- (a) a High School diploma with
- (b) "B" or higher standing in the required courses of Grade XII (see below) and
- (c) an average in these courses of at least 60%.

## **Faculty of Arts and Science**

For a **B.A.** program, the general requirements with credit in—

1. English 30.
2. Social Studies 30.
3. Mathematics 30.
4. French 30 or German 30 or Latin 30.
- 5 and 6. **Two** of: Chemistry 30, Physics 30, Biology 32, French 30 or German 30 or Latin 30.

For a **B.Sc.** program, the general requirements with credit in—

1. English 30.
2. Social Studies 30.
- \*3. Mathematics 30.
4. French 30 or German 30 or Latin 30.
- 5 and 6. **Two** of: Chemistry 30, Physics 30, Biology 32.

(Students planning to major in science should have Chemistry 30 and Physics 30 where possible.)

\*Mathematics 31 (Trigonometry) with B standing or better will also be required for admission to all B.Sc. programs in the physical sciences (chemistry, geology, mathematics and physics).



For the **B.Mus.** program, the general requirements with credit in—

1. English 30.
2. Social Studies 30.
3. Mathematics 30.
4. French 30 or German 30 or Latin 30.
- 5 and 6. **Two** of: Chemistry 30, Physics 30, Biology 30, French 30 or German 30 or Latin 30.
7. In music subjects, the completion of Grade VIII practical and Grades IV and V theoretical of the Western Board of Music examinations or equivalent standing.

**These general regulations notwithstanding, the University may, at its discretion, refuse admission to any applicant. For example, this regulation will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal entrance requirements at the University of Alberta.**

Note: Students who completed High School Grade XII in 1954 or earlier will be given full consideration. They are advised to write or to see the Registrar of the University and to provide him with complete transcripts of their high school records.

Candidates from outside Alberta will be required to meet equivalent standards.

#### **The Committee on First-Year Students**

First-year students of all faculties except Dentistry, Law and Medicine are under the jurisdiction of the Committee on First-Year Students.

### **PROMOTION REGULATIONS**

Since students' fees cover less than one-third of the cost to the province of their University education, the administration is in duty bound to see to it that only those students remain in the University who make effective use of its facilities.

#### **Faculty Regulations**

Academic regulations governing students in the various programs offered by the Faculty of Arts and Science appear in the sections of the Calendar in which such programs are outlined.

### **PROGRAMS OF STUDY**

The Faculty of Arts and Science offers honors courses and general courses leading to the degrees of Bachelor of Arts (B.A.), Bachelor of Science (B.Sc.), Bachelor of Music (B.Mus.), Bachelor of Science in Household Economics. It is associated with the Faculty of Law in courses leading to the combined degrees of Bachelor of Arts and Bachelor of Laws. Courses leading to a diploma and an intermediate diploma in Art are also offered. The faculty includes the School of Household Economics.

The entrance requirements for the courses leading to the various degrees may be found in the statement on matriculation.

**Students registering for their first year will select a particular subject of concentration, and will register either in the pattern of the general course or in the honors program as prescribed for that subject.**

The honors programs lead to the B.A. or B.Sc. degree "with honors" in a particular subject or subjects, in four years. They are designed to provide specialization in that subject or subjects together with a longer training than in the general course, as well as the higher standard suggested by the term "honors". A student need not commit himself in his first year, and may register in the appropriate pattern of the first year of the general course. If he obtains a sufficiently high standing and is recommended by the department concerned, he may then commence the corresponding honors program in the second year. A student who wishes to register in an honors program in the first year must obtain the approval of the department in which he plans to specialize. Outlines of honors programs and regulations concerning honors courses are given on later pages of this calendar.

The general course leads to a B.A. or B.Sc. degree in three years. It is designed to give students a general education, with a certain amount of concentration on one or two subjects. In their second and third years students will register as prescribed for the pattern selected in the first year, and their choice of

courses must be approved by the department in which they are concentrating. Students may change from one pattern to another with permission of the Dean. Pattern programs are outlined on later pages of this calendar.

### PROGRAMS OF STUDY

Notice: Effective September 1, 1963, the general course program will undergo some modification. The present patterns system will be replaced by a program which includes certain compulsory subjects and provides for areas of concentration. All students registering for the first time in September, 1963, will be required to complete the new program. Students registering now, however, will be able to complete their degrees according to the present patterns, but may, after September 1, 1963, change to the new program if they find it to their advantage.

The courses in Arts and Science are classified in three divisions as follows:

#### Division A

Art	Italian
Classics 350, 351, and 354	Italian Literature in English Translation
Comparative Literature	350
Drama	Latin
English	Music
General Linguistics 400	Old and New Testament Literature
French	Polish
German	Russian
Greek	Russian Literature in English 350
Hebrew (St. Stephen's College)	Spanish
Household Economics 350	Ukrainian

#### Division B

Anthropology	Geography 200, 300, 302, 400, 402,
Classics 352, 353, 355, 356, and 357	404, 406, 408, 410, 412, 414, 500,
Christian Apologetics 366 (St. Joseph's College)	502, 504, 506, 550.
Economics	History
Education	Philosophy
	Political Science
	Psychology
	Sociology

#### Division C

Astronomy	Geography 201, 301, 303, 401, 403,
Bacteriology (including Microbiology)	405, 501, 551
Biochemistry	Geology
Biology	Household Economics 210
Botany	Mathematics
Chemistry	Physical Science
Clinical Pathology	Physics
Entomology	Physiology
Genetics	Statistics
	Zoology

Courses numbered 100 to 299 inclusive, described as junior, are open to first-year students and are also available as options in senior years of certain patterns. Courses numbered 300 to 499, described as senior, are designed primarily for students beyond the first year at University. Those numbered 500 or higher are open mainly to honors and graduate students. For further information, particularly in the matter of prerequisites, students are advised to consult the section of the calendar containing detailed descriptions of courses.

#### Degrees with Honors in the Faculty of Arts and Science

A student with approved qualifications may proceed, under the supervision of one of the departments, to the degree of Bachelor of Arts or Bachelor of Science with honors, by following a course of study which is largely concentrated on one or two subjects. The time required for an honors degree is four years from senior matriculation, and the course may be interrupted only by special

permission of the Council of the Faculty upon the recommendation of the committee on honors. The courses in honors are administered by the Dean and a committee of the Faculty of Arts and Science.

Some departments provide a special first-year program for students who wish to take honors, although in most departments the difference between the honors program and the general course does not appear until the second year. Permission to take a first-year honors program is granted to students with high matriculation standing and with the approval of the department concerned. Application for this privilege should be made through the head of the department at the time of registration. A student who, in his first year, takes one of these special programs and fails to make the standing necessary for continuance in honors, or decides not to attempt honors, must continue in an appropriate pattern of the general course and must subsequently complete all the requirements of that pattern. The special first-year programs are so designed that a student can proceed in this way without penalty, by some adjustments in the second and third years.

Students with satisfactory standing may proceed from the first year in a pattern of the general course to the second year of the honors program. A student desiring to do so must apply through the head of the department to the Dean, preferably during his first year and not later than the time of registration for his second year.

Promotion from first year to second year, as well as from second to third and third to fourth, is by recommendation of the department concerned, for which an average of 65% or higher is usually required. A student who is not recommended to continue honors at the end of his second year will be transferred to the general course. He must arrange his program to comply with the general regulations.

A student who is not recommended to continue honors at the end of his third year, or who fails to complete the requirements for honors in his fourth year, will be granted a pass degree forthwith, provided that the courses he has taken and the standing attained therein comply with the general regulations for the general course. Otherwise he may be required to take one or more additional courses in a subsequent summer or winter session. A student who, for any reason, is unable to return for the fourth year may apply for a pass degree under the same conditions.

In all years a student's program must be approved by his department, subject to the following general provisions:

1. A student is not permitted to confine his studies to one of divisions A, B, C but must, during his first three years, take at least three courses outside the division to which his honors subject belongs.
2. In the third and fourth years a good deal of latitude is permitted in order to meet the needs of individual students. A student may choose whether to concentrate closely on one subject or to widen his field of study. In the later case he will not be required to take, over the four years, more than ten courses in the subject of concentration.
3. German 210 or Russian 210 is permitted for credit as an approved option in any year.
4. The term "option", where it appears in the programs, should be construed as a course freely chosen by the student, provided that he has any necessary prerequisites or corequisites. An "approved option" should be construed as an option approved by the department directing the program of the student concerned.

At the end of the fourth year some departments require candidates for honors to take a final comprehensive examination as well as examinations in the courses prescribed for the year.

Honors are awarded in two classes, first-class honors and honors. For first-class honors an average of 80% is required; for honors 65%. In awarding honors the entire university record of the student may be considered.

The prescriptions of the departments for the courses in honors follow.

**DEPARTMENT OF BIOCHEMISTRY****Honors in Biochemistry**

In the Honors program in Biochemistry opportunity will be given, in the choice of options, for concentration in various areas of Biochemistry.

**First Year**

Chemistry 230, Chemistry 250, Mathematics 200 or 201, Physics 240, English 200 or 210 (or the language of matriculation), Physical Education.

**Second Year**

Botany 201 Zoology 220, Chemistry 312, Mathematics 304, Physics 340, an option from Division A or B (German 210 or Russian 210 recommended).

**Third Year**

Biochemistry 300 and 301, Chemistry 372, Chemistry 450 or 550, an option from Division C, an option from Division A or B.

**Fourth Year (beginning 1962-63)**

Two graduate half-courses in Biochemistry, Biochemistry 501, three options. Recommended C options for third and fourth years include: Biometrics 454, Chemistry 670, Genetics 351, Microbiology 360, Physiology 361, Zoology 300. Students are advised to have a reading knowledge of French, German and Russian. Attendance at the Departmental Seminar is required in the fourth year. Students may be required to take a comprehensive oral examination at the end of the fourth year.

For students already enrolled in Honors Biochemistry, the old program remains in force—

**Third Year**

Biochemistry 400, Chemistry 372, Physiology 361, an option (Zoology 300 recommended), an option from Division A or B.

**Fourth Year**

Chemistry 550; two of the following half-courses: Biochemistry 511, 531, 551, 571; two options. Attendance at the Departmental Seminar is required.

**DEPARTMENT OF BOTANY****Honors in Botany****First Year**

Botany 201, Chemistry 230, Zoology 220, Geology 201, an option from Division A or B, Physical Education.

**Second Year**

Two senior courses in Botany, Chemistry 350, an option from Division C, an option from Division A or B.

**Third Year**

Two senior courses in Botany, an option from Division A or B, two Division C options.

**Fourth Year**

Two advanced courses in Botany, two Division C options.

Options are to be selected in consultation with the Department. Honors students in Botany are expected during the summer vacations to make themselves acquainted with Canadian plants. Honors students are invited to apply for summer assistantships.

**DEPARTMENT OF CHEMISTRY****Honors in Chemistry****First Year**

Chemistry 230, Chemistry 250, Mathematics 201, Physics 240, English 200, or 210, Physical Education.

**Second Year**

Chemistry 372, Chemistry 312, Mathematics 304, Physics 340, an option from the special list of Division A or B courses for B.Sc. students (a foreign language must not be included as this option).

### Third and Fourth Years

The equivalent of ten full courses will be required. These must include German 210, or Russian 210, (or, if the student has credit for either of these) any A or B course from the Special list for B.Sc. students; Mathematics 404; Chemistry 500, 511, 531, 550, 551, 555, 575, 579, 581, 583, and 585. Two open options are permitted.

In addition to the regular course examinations, candidates for honors may be given one or more oral or written examinations in the field of chemistry at the end of the fourth year.

Attendance in the Departmental Research Seminar, Chemistry 602, which meets once a week, is required in the fourth year.

Notes: 1. All options shall be selected after consultation with the Department.

2. Special programs will be set up, following the above as closely as possible, for students transferring from other programs.

## DEPARTMENT OF CLASSICS

A statement will be found below of the general scheme of courses required to obtain honors in this department. It is not implied that this scheme must be rigidly followed; the department is prepared at any time to discuss with prospective or actual students reasonable equivalents designed to meet special needs or desires of the persons concerned. In the courses dealing with the literary history, the economic and political history, and the private life of the classical peoples, oral examinations may at any time replace written tests, and a comprehensive examination, written or oral as the department may determine, will be a necessary condition for attaining final honors.

Students who may desire an honors course in Latin and English, Latin and French, Latin and German, Greek and French, and German, or in Greek and Philosophy, can obtain information and advice on application to the department.

### Honors in Classics

#### First Year

Greek 100; Latin 200; Classical Survey Course 350 (Greek Classics) or Classical Survey Course 352 (Greek History); two approved options, one of which should be from the C Division; Physical Education.

#### Second Year

Greek 300; one senior Latin course; Classical Survey Course 354 (Ancient Art) or Classical Survey Course 356 (Early Civilization); Classical Survey Course 352 (Greek History) or Classical Survey Course 350 (Greek Classics); Classical Survey Course 351 (Latin Classics) or Classical Survey Course 353 (Roman History). An option approved by the department may be substituted for **one** of the survey courses listed above.

#### Third Year

One senior Greek course; one course in honors Greek; one course in honors Latin; either Classical Survey Course 354 (Ancient Art) or Classical Survey Course 353 (Roman History) or Classical Survey Course 351 (Latin Classics); either Classical Survey Course 354 (Ancient Art) or Classical Survey Course 356 (Early Civilization). An option approved by the department may be substituted for **one** of the survey courses listed above.

#### Fourth Year

Either Greek or Latin as a major, two courses: Latin or Greek as a minor, one course; one approved option; Latin or Greek Prose (one hour a week).

### Honors in Classics, Ancient History and Archaeology

A program for honors with particular emphasis on Ancient History and Archaeology may be arranged by discussion with the department.

Note: Courses in Sanskrit, Comparative Philology, Comparative Syntax, Greek Dialects and Italic Dialects are also offered by the department and may be credited towards the M.A. degree.



**Honors in Latin and French****First Year**

Latin 200; a French course; Classical Survey Course 350 (Greek Classics); two approved options, one of which should be from the C Division; Physical Education.

**Second Year**

One Latin course; one French course; two options from Divisions A and B, of which one should preferably be Classical Survey Course 351 (Latin Classics), either in this year or the third year.

**Third Year**

One Latin course; one French course; two options from Divisions A and B; General Linguistics 400.

**Fourth Year**

Two Latin courses; one French course; one option from Divisions A and B; Latin Prose (one hour a week).

Note: Classical Survey Course 353 (Roman History) is recommended for selection in the options of the second, third and fourth years.

**Honors in Latin and English****First Year**

Latin 200; English 200; Classical Survey Course 351 (Latin Classics) or 353 (Roman History); two approved options, one of which should be from C Division; Physical Education.

**Second Year**

A senior course in Latin; Latin Prose (one hour a week); a senior course in English; Classical Survey Course 351 (Latin Classics) or 353 (Roman History); an option.

**Third Year**

A senior course in Latin; Latin Prose (one hour a week), a senior course in English; Classical Survey Course 350 (Greek Classics) or a second senior course in English; an option.

**Fourth Year**

Two senior courses in Latin; Latin Prose (one hour a week); a senior course in English; a second senior course in English or Classical Survey Course 350 (Greek Classics).

(For Honors in French and Latin, see under Department of Modern Languages.)

**DEPARTMENT OF ENGLISH**

Students wishing to read for Honors in English should consult the head of the department at the beginning of the first year. Students deciding during or at the end of the first year to undertake Honors in English must consult the head of the department at the earliest possible moment in order to ascertain whether their first-year courses and their standing in these courses are acceptable as a basis for admission to Honors at the beginning of the second year; and in cases where the first-year courses do not seem to provide an adequate basis, to discuss what extra work should be taken to rectify the situation.

**First Year**

English 200, French 200 or Latin 200 or German 200 or Italian 100 or, with permission, another language; an approved philosophy course; two approved options, one of which may be a second language.

**Second Year**

Three senior English courses; continuation of the first language; an approved option, provided that language requirements have been met\*; English 501.

**Third Year**

Three senior English courses; two approved options, provided that language requirements have been met\*; English 502. English 504 will be commenced in the spring of this year and continued throughout the fourth.

**Fourth Year**

Two senior English courses; two approved options, both of which may be senior English courses if language requirements have been met\*; English 504 is to be continued and will count as a fifth course; English 503.

Note: Five of the senior English courses must be chosen to represent each of the following periods of literature: Old and Middle English; Renaissance, Seventeenth and Eighteenth Centuries, Nineteenth Century, Modern Period. At the discretion of the department, a student may take up to eleven full senior English courses. All courses are to be chosen in consultation with the head of the department.

\*Language Requirements: A student who begins at University his first language (one chosen to satisfy the language requirement of the first year) must continue it for two more years. If the language of the first year is a language of matriculation, it need be continued for one year only. A student who begins at University a second language (one elected as an approved option) must continue it for one more year, unless specially exempted.

## DEPARTMENT OF ENTOMOLOGY

### Honors in Entomology

#### First Year

Physics 100 or 200, Botany 201, Zoology 220, Chemistry 230, English 200 or 210, Physical Education.

#### Second Year

Entomology 301; Zoology 350; Special A or B course; Chemistry 350; an option, one of the following recommended: a senior Zoology, Statistics 255; Geology 201 or 353, Botany 300 or 310 or 320.

#### Third Year

One of Entomology 414, 522, 556; Special A or B course; three options, the following recommended: Entomology 414, 475, 522, 556, 560, a senior Zoology course, Geology 201 or 353, Botany 300 or 310 or 320, Genetics 351, Microbiology 360, Biochemistry 300.

#### Fourth Year

Entomology 475, 522, 556 or 560; German 210 or another approved language; two options. It is recommended that these be selected from among Entomology 560, 612, 623 and the courses suggested for the second and third year options.

## DEPARTMENT OF GEOGRAPHY

The Department offers both the B.A. and the B.Sc. degrees with Honors in Geography. Students wishing to stress the humanities and social sciences should register in the B.A. program; those who wish to stress the physical and biological sciences should register in the B.Sc. Program.

### B.A. with Honors in Geography

#### First Year

Geography 201, English 200, one junior course from Division B, one A or B option, Botany 201 or Zoology 220.

#### Second Year

Geography 300; Geography 301; either Geography 302 or 303; two approved options.

#### Third Year

Geography 400; one of Geography 302, 303, 401, 410, 416, 418 or 420; Zoology 321 and Botany 321; two approved senior options.

#### Fourth Year

Geography 502; one of Geography 402, 404, 406, 408, 412, 414 or 422; three approved senior options.

### B.Sc. with Honors in Geography

#### First Year

Geography 201; English 200 or 210; Geology 201; one of Botany 201, Zoology 220; one of Mathematics 200 or 201, Statistics 255, Physics 240, Chemistry 230; Physical Education.

#### Second Year

Geography 300; Geography 301; Geography 303; two approved options from Division C.

**Third Year**

Geography 400; one of Geography 302, 401, 405, 410, 416 or 418; one approved option from Divisions A or B; Zoology 321 and Botany 321; one approved option from Division C.

**Fourth Year**

Geography 502; an approved second senior Geography course; one approved option in Geology; one approved option from Division C; one approved option. Students are required to have a reading knowledge of French or German. At the end of the fourth year a candidate for honors will be required to take an oral or written examination in the field of Geography.

**DEPARTMENT OF GENETICS****Honors in Genetics**

The Honors program in Genetics is designed primarily to prepare student for advanced studies that may lead to higher degrees and research and academic careers. To some extent the program can be fitted to individual needs. A final comprehensive examination will test the student's general knowledge of facts and principles.

Students choosing the Honors program are requested to meet the Head of the Department of Genetics as early as possible, in order to draw up their course program.

Provision for summer employment of Honors students in Genetics can usually be made. During their senior years it is expected that Honors students will assist as demonstrators in elementary laboratories.

**First Year**

Botany 201; Zoology 220; Chemistry 230; English 200 or 210; one of Mathematics 200 or 201.

**Second Year**

Genetics 351; Chemistry 350; Physics 100 or 200; an approved course in Botany, Entomology, Microbiology or Zoology; one option from Division A or B (French 200 recommended).

**Third Year**

Genetics 530; Genetics 465; one of Genetics 463 or 552 or Genetics 481; Biometrics 455; Biochemistry 300; one approved option from Division A or B (German 210 or Russian 210 recommended).

**Fourth Year**

Geology 455 and three or four options to be selected in consultation with the one senior course in Botany or Zoology; two approved options from Division A or B.

**DEPARTMENT OF GEOLOGY****Honors in Geology****First Year**

Recommended program: Geology 201, Chemistry 230; Physics 242, Mathematics 201; English 200 or 210; Physical Education.

**Second Year**

Geology 351; Geology 353; Botany 201 or Zoology 220; Physics 340; one option from Division A or B.

**Third Year**

Geology 454; Geology 457; Geology 461 and 464; Geology 467 (Field School); Chemistry 370, one option.\*

**Fourth Year**

Geology 455 and three or four options to be selected in consultation with the Department.\*

Students are advised to have a reading knowledge of a modern language.

\*One of these options must be from the A or B Division and one should be a course in Geophysics.

**Honors in Physics and Geology**

See under Department of Physics.

**DEPARTMENT OF HISTORY****Honors in History**

Students proposing to read for Honors in History should consult the Head of the Department at the time of their first registration. Registration in the first year of Honors is similar to that in the History pattern, but should include a foreign language. Students who wish to enter Honors at the beginning of the second year should consult the Head of the Department.

The degree of Bachelor of Arts with Honors in History is awarded on the following basis:

- (1) Comprehensive examinations written at the end of the fourth year in three fields of historical study:

One of British Medieval	(History 511)
British modern	(History 512)
One of Canadian	(History 513)
American	(History 514)
One of Medieval European	(History 515)
European, 1500-1789	(History 516)
European, 1789-1939	(History 517)

Candidates may not present both the British and European medieval fields.

- (2) Examinations, oral and written, at the end of the fourth year, in a special historical subject chosen by the student not later than the beginning of his third year (History 500 and 501). The candidate in addition will be required to write a minor thesis utilizing primary source material.
- (3) Satisfactory completion of approved courses in two other fields of study chosen in consultation with the Head of the Department, e.g. English, Philosophy, Political Science, a second language. At least two courses must be taken during a student's undergraduate program in each of the two fields chosen.
- (4) Proof of ability to read a modern language other than English.

Normally Honors students in History take five courses a year. In their third year they will take History courses numbered in the 400's. They are expected to pursue a course of reading during the summers. This is arranged with the Department in connection with preparation for the comprehensive papers and the special subject. In their fourth year they normally will be enrolled in the appropriate History courses (Comprehensive) for the fields that they have chosen in consultation with the Head of the History Department.

**DEPARTMENT OF MATHEMATICS****Honors in Mathematics****First Year**

Mathematics 201, Statistics 255 or Mathematics 270, Physics 242, one option from Division C, one option from Division A or B, Physical Education.

**Second Year**

Mathematics 306, Mathematics 310, Statistics 255 or Mathematics 270, one option from Division C, one option from Division A or B.

**Third Year**

Mathematics 421, 422 and 425, one approved Mathematics option (preferably Mathematics 360), one approved option and one option from Division A or B.

**Fourth Year**

Mathematics 500, two approved Mathematics options preferably Mathematics 510 and 540, two approved options (at least one from another department).

Notes: The program must be approved by the Department of Mathematics. Students who hope to do graduate work in mathematics should select two of the open options in third and fourth year from Mathematics or Mathematical Physics.

The A or B options may include beginners' language courses such as German 210 or Russian 210.

### Honors in Applied Mathematics

The B.Sc. degree with Honors in Applied Mathematics may be taken by students who wish to specialize in mechanics, including hydrodynamics, aerodynamics, elasticity and the theory of relativity.

#### First Year

As above.

#### Second Year

As above. The C option should preferably be Physics 380.

#### Third Year

Mathematics 421, 422, 425, 430; an approved Physics option (preferably Physics 480), an option from Physics or Mathematics, or Geography 405.

#### Fourth Year

Mathematics 500, Physics 550, an option from Division A or B, two approved options from Mathematics or Physics (preferably from Mathematics 540, 555, 580, or Physics 510, 570).

Note: The program must be approved by the Department of Mathematics. The A or B options may include beginners' language courses such as German 210 and Russian 210.

### DEPARTMENT OF BACTERIOLOGY

#### Honors in Microbiology

#### First Year

Botany 201 or Zoology 220.

Chemistry 230.

Mathematics 201.

Physics 200.

English 200 or 201.

Physical Education.

#### Second Year

Microbiology 360.

Zoology 220 or Botany 201.

Chemistry 350.

Botany 320 or 340 or Plant Science 455.

A language course (German 210 recommended).

#### Third Year

Microbiology 401.

Chemistry 370.

Biochemistry 300.

Genetics 351.

An option from Division A or B.

#### Fourth Year

Microbiology 402.

Genetics 530.

Microbiology 503\*.

An option from A or B.

An option.

\*During the fourth year each candidate for the Honors degree will be required to conduct a directed studies problem under the supervision of a faculty member. The problem will, if possible, be related to the special field of interest of the student and will involve investigation of current literature and some experimental work on the part of the student. The student will be required to submit a written report of the investigation for approval by the supervising faculty member and to make a brief oral presentation of his findings to staff and students of the Department.

### DEPARTMENT OF MODERN LANGUAGES

The Department consists of three Divisions:

- I. Division of Romance Languages (French, Spanish, Italian);
- II. Division of Germanic Languages and Linguistics;
- III. Division of Slavonic Languages (Russian, Ukrainian, Polish).

(This Division also offers, in conjunction with the Departments of History and Political Economy, a special area program of Slavonic Studies; see (3) below and page (61).



Many different programs are possible and students should first consult the Division of main interest before choosing courses. In all cases departmental approval of the program chosen is required before registration.

Students may register in Honors in the first year, or may enter in the second year from the foreign language pattern.

Degrees with Honors from this Department will fall into three main groups:—

- (1) Honors in Modern Languages and Literature,
- (2) Honors in one Modern Language and an approved minor subject, such as Latin or English.
- (3) Honors in Slavonic and Soviet Studies, with the Russian Language and its Literature serving as the core.

Programs in group (1) will require a maximum of eight courses in the language chosen as the major, four or five courses in the language chosen as the minor, and seven or eight options (one of which must be a Division C course in the first year), for a total of twenty courses. Some of the optional subjects will be integrated with the language program, while others should be general options.

These programs are recommended to students wishing to specialize in a foreign language in order to embrace an academic career, particularly to those intending to go on to post-graduate work. A reduction may be made in the number of courses in the major language by students preparing for other careers and in special cases. As a general rule, students entering with a normal matriculation will not be permitted a third modern language until they have laid a firm foundation in the first two.

Programs in group (2) will require eight courses in the major, four to six in the minor subject, and six to eight approved options, (one of which must be a division C course in the first year), for a total of twenty courses. Programs in this group will be arranged in consultation with both Departments concerned.

Programs in group (3) will require seven courses in Russian, two or three courses in a second Slavonic language, Introduction to Comparative Slavonic Philology 540, the Seminar in Slavonic Philology 545, one Division C course in the first year four approved options, and four or five courses, approved by an inter-departmental committee, in History, Economics or Political Science related to the Slavic area, for a total of twenty courses and one seminar.

In addition to the courses listed here, all Honors students will take, in each year, such laboratory hours as may be deemed necessary to improve their oral proficiency.

Apart from the regular course examinations at the end of the fourth year, students may be required to take comprehensive oral examinations in the languages studied.

High School students intending to specialize in Modern Languages are advised to take as much Latin as they can in addition to their Modern Languages.

### DEPARTMENT OF PHILOSOPHY

Degrees with Honors from this Department will fall into these groups:

- (1) B.A. with Honors in Philosophy and an approved minor subject;
- (2) B.A. with Honors in Philosophy and Greek.

Students are advised to consult the Department for information before choosing one of the groups, and in any case, Departmental approval of the final program of studies is required before registration. In the case of the students under (2), the program will be arranged in consultation with the Department of Classics and the Department of Philosophy.

Honors in Philosophy will require nine courses in Philosophy. Four in a minor subject, or an integrated selection of five or six courses in a group of subjects, will also be required. This part of the program will be closely related to the student's special interests within the field of philosophy. Optional courses outside the fields of philosophy and the minor will complete the program.

Honors in Philosophy and Greek will follow the requirements of Honors in Philosophy, with some reduction in the number of Philosophy courses in order to increase the number of Greek courses beyond the requirements for a minor subject.

In addition to final examinations in courses prescribed, students in the final year of both groups will be required to write two comprehensive examinations, one of which may take the form of an essay paper.

**DEPARTMENT OF PHYSICS\*****Honors in Physics****First Year**

Physics 242, Mathematics 201, Mathematics 270, Chemistry 230, English 200 or 210, Physical Education.

First-year Engineering or the first year of the Physics pattern in the general course may be accepted in consultation with the department.

**Second Year**

Physics 360; Physics 380; Mathematics 306, a foreign language (German 210 or Russian 210 is recommended), an option from Division B.

**Third Year**

Physics 440; Physics 470; Physics 480; Mathematics 320; Mathematics 430 or an equivalent course; Mathematics 421 and 422.

**Fourth Year**

Physics 510; Physics 550; Physics 570; Physics 571 laboratory; three of Mathematics 500; Physics 516, Physics 520, Physics 540, Physics 572. Other options in the Fourth Year can be arranged in special cases.

Students are also expected to take part in the weekly Physics Colloquium.

At the end of the Fourth year there will be, in addition to the regular examinations in each lecture course, a written comprehensive examination on the work of the whole course.

\*Note: The B.Sc. in Engineering Physics—Students interested in the B.Sc. degree in Engineering Physics should consult with the Dean of the Faculty of Engineering.

**Honors in Physics and Geology****First Year**

Physics 242, Geology 201, Mathematics 201, Chemistry 230, English 200 or 210, Physical Education. (The first year of the Geology or Physics patterns may be accepted in consultation with the Department.)

**Second Year**

Physics 380; Geology 351; Mathematics 304; Chemistry 372; an A or B option.

**Third Year**

Physics 360; Geology 454; Geology 457; Mathematics 421 and 422; an A or B option.

**Fourth Year**

Physics 480; Physics 520; Physics 440 or Physics 470 and 471; two approved senior Geology options.

**DEPARTMENT OF PHYSIOLOGY****Honors in Physiology**

The honors program is designed primarily to prepare students for advanced study and research leading to academic and research careers. The secondary purpose is to provide students with a specialized knowledge, both theoretical and practical, to prepare them for positions as research assistants in government, hospital and industrial laboratories. The emphasis has been placed on depth rather than breadth. Consideration will be given, in choice of options and reading material, to students with interest in a particular branch of Physiology or in Pharmacology.

**First Year**

Chemistry 230, Physics 100, 200 or 240, Zoology 220, Mathematics 200 or 201, English 200 or 210, Physical Education.

**Second Year**

Chemistry 350, Chemistry 370, Physiology 361, Zoology 300, a modern language (German 210 or Russian 210 suggested).

**Third Year**

Physiology 463, Biochemistry 300, Physiology 504 or Physiology 505, Physiology 600 (Seminar), one option from Division A or B, one approved science option.

**Fourth Year**

One of Physiology 501, 502, 503 or Pharmacology 504; an approved honors or graduate course in Biochemistry; Physiology 504 or Physiology 505 (which-

ever was not taken in the Third Year); Physiology 506; Physiology 600; Biometrics 455; one approved science option (Bacteriology 360, Botany 320 and Pharmacology 421 recommended).

A reading knowledge of French, German or Russian is recommended.

A comprehensive oral examination may be required at the termination of the prescribed course.

## DEPARTMENT OF POLITICAL ECONOMY

### Honors in Economics

#### First Year

Economics 200, one course from Division A, one course from Division C, two options to be selected with the advice of the department, Physical Education.

#### Second Year

Two courses in Economics, Statistics 255, two options to be chosen in consultation with the department.

#### Third and Fourth Years

Before entering the third year each student will arrange, in consultation with the department, a program of study and lectures to prepare himself for final comprehensive examinations. Unless they have been taken in the First and Second Years, the following courses are required: Two courses in foreign languages, preferably French or German or Russian (either two courses in one language or one in each of two languages); Accounting 200; Mathematics 200 or 201.

### Honors in Political Science

#### First Year

Political Science 200.

One course from Division A.

One course from Division C.

Two options to be chosen in consultation with the department.

Physical Education.

#### Second Year

Two courses in Political Science.

Three options to be chosen in consultation with the department.

#### Third and Fourth Years

Before entering the third year, each student will arrange, in consultation with the department, a program of study and lectures to prepare himself for final comprehensive examinations. Unless they have been taken in the First and Second Years, two courses in foreign languages, preferably French or German or Russian, are required. Students may take either two courses in one language or one in each of two languages.

## DEPARTMENT OF PSYCHOLOGY

The Department offers both the B.A. and the B.Sc. degrees with honors in Psychology. Students wishing to emphasize the Humanities and Social Sciences in their program should register for the B.A.; those who wish to emphasize the Physical and Biological Sciences should register for the B.Sc.

Honors in Psychology will require six to ten courses in Psychology, including the following: Psychology 202, 382, 430, 460 and 500. A minimum of five courses will be taken in related subjects, one of which must be Statistics 205. The courses in related subjects might be all in one field (e.g., Mathematics or Biology) or in several, depending on the student's special interest and relevance to the subject matter of Psychology. In addition, a minimum of five optional subjects will be chosen: some of these will be integrated with the program in Psychology, while others must be general options.

An important feature of the honors program includes the opportunity for the student to engage in independent study and research. During the fourth year the student in Psychology will write an honors thesis under the guidance of a member of the Department.

In addition to the regular course examinations, candidates for honors will be required to write an examination covering the general field of Psychology and to conduct a seminar based primarily on the honors thesis.

### SLAVONIC AND SOVIET STUDIES

Students wishing to undertake a program of Slavonic and Soviet studies should register for Honors in History, Modern Languages, Economics or Political Science, depending on the area of concentration desired. By choosing his options according to the course requirements set out by an interdepartmental committee, a student may qualify to have the notation "Slavonic and Soviet Studies" added to his record upon satisfactory completion of his whole program.

### DEPARTMENT OF SOCIOLOGY

#### Honors in Sociology

Degrees with Honors from this Department will fall into two groups:

- (1) B.A. with Honors in Sociology and an approved minor subject;
- (2) B.A. with Honors in Sociology and Psychology.

There are several possible programs within each of these groups, and more detailed information is available from the Department. Students are advised to consult the Department for information before choosing one of the groups, and in any case, Departmental approval of the final program of studies is required before registration. In the case of students under (2), the program will be arranged in consultation with the Department of Psychology.

Honors in Sociology will require eight to ten courses in Sociology. Depending on the special interests of the students, five or six courses in a related minor subject will be taken. An additional five or six courses outside the field of Sociology and the minor area will be required to complete the program.

Honors in Sociology and Psychology will require seven courses in Sociology and seven in Psychology. In addition, six other courses will be required to complete the program.

In addition to final examinations in courses prescribed, students in the final year of each group will be required to write two comprehensive examinations, one of which may take the form of an essay paper.

### DEPARTMENT OF ZOOLOGY

#### Honors in Zoology

The Honors program of the Department of Zoology is designed primarily to provide a broad knowledge of biology in preparation for advanced study towards higher degrees and a research or academic career. To a limited extent the program can be fitted to individual needs. A final comprehensive examination will test the student's general knowledge of biological facts and principles.

Students choosing to enter the Honors program should make themselves known to the Department as early as possible during their first year of study. The Honors program must be drawn up in consultation with members of the Department.

Provisions for summer employment of Honors students in biological work usually can be made. During their senior years it is expected that Honors students will assist as demonstrators in elementary laboratories.

#### First Year

Zoology 220, Botany 201, Chemistry 230, Mathematics 200 or 201, English 200 or 210, Physical Education.

#### Second Year

Zoology 300, Chemistry 350, Physics 100 or 200 or 240, Zoology 350, one option from Division A or B.

#### Third Year

Zoology 525; two senior Zoology courses; Genetics 351; Biochemistry 300; an option (German 210 or Russian 210 recommended).

#### Fourth Year

Zoology 520, Zoology 525, three senior Zoology courses, an approved Division C option, an A or B option, a comprehensive examination.

### GENERAL COURSE REGULATIONS

Attention is directed to the regulation in Part II of the Calendar that makes every student responsible for the completeness and accuracy of his registration. This regulation will be strictly enforced.

Students registered in a "100" foreign language (beginner's language) in the winter session will be required to take an intensive course of five hours per week instead of the usual three hours.

No candidate for the Bachelor's degree in the Faculty of Arts and Science will be recommended to the General Faculty Council for the award of the degree until three regular academic sessions, September to April, have elapsed from the date of registration in the first year.

Except by special permission of the Council of the Faculty, no student under its jurisdiction may offer for credit in any period of twelve months from September 1 to August 31 more than five courses either in the regular winter session from September to April or in both the winter and the summer session. Except by special permission of the Council of the Faculty, no student may take in the summer session more than two courses.

Normally, not more than two courses may be taken in any one department, or division of a department, in any given year and not more than five courses in any one department, or division thereof, during the three years of the general course. In special cases the Dean may permit a student to take three courses in one department, or division of a department, in the final year, making a total of six courses in the same department or division thereof. (The divisions referred to in this paragraph are those which exist in the Departments of Classics, Fine Arts, Modern Languages, and Political Economy; for example: Department of Fine Arts, Drama Division.)

Students proceeding to a Bachelor's degree in the Faculty of Arts and Science will be required to attend at least one regular academic session, September to April. Exceptions may be made to this rule in the cases of teachers who have had at least two years' experience subsequent to receiving their permanent certificates. Such students may meet the requirements for the degree of Bachelor of Arts or Bachelor of Science by attendance at summer sessions only. They are warned that the University cannot undertake to offer in summer sessions all the courses which may be desired for the B.A. degree or required for the B.Sc. degree.

To be granted the B.A. or B.Sc. degree a student must obtain a passing mark or better in fifteen courses and obtain an average of 60 percent in all courses credited towards the degree after the first year. A student will not be allowed to write more than five supplemental examinations for the purpose of obtaining passing marks or raising his average to the required 60 percent. A student will not be allowed to write more than two supplemental examinations in any year.

A student who is repeating a year will be granted no supplemental privileges in the courses taken that year and must pass all courses with a 60 percent average to be allowed to continue. The privilege of repeating a year will be granted to a student not more than once during his candidacy for a degree in this Faculty, unless by special permission of the Dean.

Students entering theology in St. Stephen's College may be exempted from two senior courses selected from Division A or B by presenting evidence that they have completed equivalent courses in the college.

Roman Catholic students in St. Joseph's College may be exempted from one senior course in Division B on presentation of a certificate from the college showing that they have satisfactorily completed the course in religious knowledge designated Christian Apologetics 366 as given in St. Joseph's College. Further, such students may substitute Philosophy 246 as given in the College for Philosophy 240 and Philosophy 356 as given in the College for a senior course in Philosophy.

Students who have successfully completed two years of a B.Sc. pattern and two years of Medicine may qualify for the B.Sc. by completing the requirements of the pattern chosen. Certain courses in Medicine may be equated with certain science courses given in the Faculty of Arts and Science.

The term "option", where it appears in the patterns, should be construed as a course freely chosen by the student, provided that he has the necessary prerequisites or corequisites. An "approved option" should be construed as an option approved by the department directing the program of the student concerned.

#### **REQUIREMENTS FOR B.A. AND B.SC. AFTER B.ED.**

Students who have qualified for the degree of B.Ed. may proceed to the degree of B.A. or B.Sc. If they have met the matriculation requirements of the Faculty of Arts and Science and have completed **thirteen** Arts and Science courses, they



will be required to complete at least **six** senior courses in the Faculty of Arts and Science with an average of 60% in these courses. Students with incomplete matriculation for Arts and Science will be required either to remove these deficiencies or to secure credit in University courses of an equivalent standard. Students who have credit in fewer than thirteen Arts and Science courses may be required to complete additional courses. Students proposing to secure the B.A. or B.Sc. in this manner will be expected to select their subjects in conformity with one of the standard Arts and Science patterns and are advised to consult the Dean of the Faculty of Arts and Science about their programs.

### **REQUIREMENTS FOR B.A. AFTER B.SC. AND B.SC. AFTER B.A.**

Students who have qualified for the degree of B.A. may proceed to the degree of B.Sc. in this Faculty; those who have qualified for the B.Sc. in this Faculty may proceed to the B.A. Students proposing to secure the B.A. or B.Sc. in this manner will be required to complete a 9-course program conforming to one of the standard Arts and Science patterns, with an average of 60% in these courses. Students with incomplete matriculation for the second degree will be required either to remove the deficiencies or to secure credit in University courses of an equivalent standard.

### **PRE-PROFESSIONAL REQUIREMENTS—FACULTY OF MEDICINE**

Students who expect to transfer to the Faculty of Medicine from the Faculty of Arts and Science should register in one of the patterns for the B.A. or B.Sc. The requirements for admission to the Faculty of Medicine are at least two years of university training, with appropriate standing, and credit in Chemistry 230 and 350, Physics 100, 200 or 240, and Zoology 220. These qualifications can be obtained, by proper choice of courses, in the first two years of the Botany, Chemistry, Entomology, Experimental Psychology, General Science, Mathematics, Physics, or Zoology patterns. The same qualifications can be obtained in three years in any pattern for the B.A.

### **PRE-PROFESSIONAL REQUIREMENTS—FACULTY OF DENTISTRY**

The Faculty of Arts and Science offers the following pre-dental year, which meets the basic minimum pre-professional requirements for the course leading to the degree of D.D.S.:

Physics 200  
Chemistry 230.  
Zoology 220.  
One A or B option (English 200 or 210 recommended).  
One approved option.  
Physical Education.

Additional requirements are listed in the calendar of the Faculty of Dentistry.

### **B.A. PATTERNS**

Students taking a foreign language in the University will normally continue to study the language of matriculation. Students planning to enter theology may elect Greek 100 as the foreign language of any pattern.

B.A. students must select three C Division courses which must include at least one biological science and one physical science or mathematics. A student may not include both Biology 341 and Botany 201 or Zoology 220 in his program, nor may he include more than one of Physical Science 341 and Physics 100 or 200.

The Division C courses for the **First Year** should be one of:

Astronomy 253, Botany 201, Zoology 220, Chemistry 130, Chemistry 230, Physics 100, Physics 200, Mathematics 200 or 201 or 260, Geology 201, Geography 201, Statistics 255.

For the **Second Year**:

any of the above or a second course in which the first year choice was taken; or Biology 341 or Physical Science 341 or Genetics 351 or Microbiology 360 or Entomology 301.

For the **Third Year**:

any of the above or Biochemistry 300 or Physiology 361.

**Division A**

(English, Foreign Languages, Art, Drama, Music)

**English****First Year**

English 200

French 200 or Latin 200 or German 200, or, with permission, another language.

History 200 or 201.

A second foreign language or a junior course from Division B.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

A science or mathematics or statistics course.

Two senior courses from Division B not in the same department or one senior course from Division B and one senior Foreign Language.

Two senior English Courses.

**Third Year**

A science or mathematics or statistics course.

A senior course from Division A or B.

An option.

Two senior English courses.

**Foreign Languages (Classical or Modern)**

(The Foreign Language patterns are generally based on two foreign languages, with the language of matriculation serving as the core. Programs must be arranged in consultation with the Department of Classics, or the Department of Modern Languages, depending on the language chosen.)

**First Year**

The foreign language of matriculation.

A second foreign language.

In special cases, permission may be given to take two of French 100, Latin 100, German 100, Greek 100, Russian 100, Spanish 100, but if such a choice is made, the student will be required, in **addition** to the courses listed below, to take a **third** senior foreign language course.

English 200.

One junior course from Division B.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

Two foreign language courses (in languages taken in the first year).

A senior course from Division A (not a foreign language).

A senior course from Division B.

A science or mathematics or statistics course.

**Third Year**

Two foreign language courses (in languages taken in the second year).

A senior course from Division A or B.

An option.

A science or mathematics or statistics course.

**Art****First Year**

Art 240 or 250.

English 200.

French 200 or Latin 200 or German 200, or, with permission, another language.

History 201.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

Art 300.  
Art 250 or 330 or 340.  
A senior course from Division A or B.  
An approved option.  
A science or mathematics or statistics course.

**Third Year**

Art 400.  
Art 250 or 330 or 340 or 450.  
A senior course from Division A or B.  
An option.  
A science or mathematics or statistics course.

**Drama****First Year**

Drama 250.  
English 200.  
French 200 or Latin 200 or German 200, or, with permission, another language.  
History 201 or another junior B option.  
A science or mathematics or statistics course.  
Physical Education.

**Second Year**

Drama 350 or 480.  
One of Drama 300, 360, 400.  
English 332.  
An approved option.  
A science or mathematics or statistics course.

**Third Year**

Drama 480 or 350.  
One of Drama 300, 360, 400.  
An approved A or B option.  
An option.  
A science or mathematics or statistics course.

**Music****First Year**

Music 200.  
English 200.  
French 200 or Latin 200 or German 200, or, with permission, another language.  
History 201.  
A science or mathematics or statistics course.  
Physical Education.

**Second Year**

Music 250.  
Music 300.  
A senior course from Division A or B.  
An approved option.  
A science or mathematics or statistics course.

**Third Year**

Music 350 or Music 410.  
Music 400.  
A senior course from Division A or B.  
An option.  
A science or mathematics or statistics course.

**DIVISION B**

(Economics, Geography, History, Mathematics, Political Science, Philosophy, Sociology, Psychology)

**Economics****First Year**

Economics 200.

English 200.

A junior course from Division B.

A junior A or B option.

A science or mathematics or statistics course or Accounting 200.

Physical Education.

**Second Year**

Economics 300.

An approved senior Economics course (preferably Economics 340).

Two approved options, one of which may be a Political Science course.

A science or mathematics or statistics course or Accounting 200.

**Third Year**

Two approved senior courses in Economics (one of these must be Economics 340 if it was not taken in the second year).

An approved option, which may be a Political Science course.

An option.

A science or mathematics or statistics course or Accounting 200.

**Geography****First Year**

Geography 201.

English 200.

A junior course from Division B.

A junior A or B option.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

Geography 300.

Geography 301.

An approved B option.

An approved A or B option.

A science or mathematics or statistics course.

**Third Year**

Geography 400.

An approved second senior geography course.

An approved B option.

An option.

A science or mathematics or statistics course.

**History****First Year**

A junior History course.

English 200.

A junior course from Division B.

A junior A or B option.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

Two senior History courses (courses numbered in the 300's).

Two approved options.

A science or mathematics or statistics course.

**Third Year**

Two senior History courses, normally courses numbered in the 400's).

An approved option.

An option.

A science or mathematics or statistics course.

**Mathematics****First Year**

Mathematics 200 or 201.  
 Mathematics 250 or 270 or Statistics 255.  
 English 200.  
 Two approved junior options from other departments.  
 Physical Education.

**Second Year**

Mathematics 304.  
 Mathematics 250 or 270 or 310 or Statistics 255.  
 Three approved options from other departments.

**Third Year**

Mathematics 330 or 360 or 404 or Statistics 450.  
 Four approved options.  
 Note: One option must be a biological science.

**Political Science****First Year**

Political Science 200.  
 English 200.  
 A junior course from Division B.  
 A junior course from Division A or B.  
 A science or mathematics or statistics course.  
 Physical Education.

**Second Year**

Two approved courses in Political Science.  
 Two approved options, one of which may be an Economics course.  
 A science or mathematics or statistics course.

**Third Year**

Two approved Political Science courses  
 An option.  
 An approved option, which may be an Economics course.  
 A science or mathematics or statistics course.

**Philosophy****First Year**

Philosophy 240 or 260.  
 English 200.  
 A junior option from Division B.  
 A junior option from Division A or B.  
 A science or mathematics or statistics course.  
 Physical Education.

**Second Year**

Philosophy 240 or 260.  
 A senior course in Philosophy.  
 An option from Division A.  
 An option from Division A or B.  
 A science or mathematics or statistics course.

**Third Year**

Two senior courses in Philosophy.  
 An option.  
 A senior option from Division B.  
 A science or mathematics or statistics course.

**Psychology****First Year**

Psychology 202.  
 English 200.  
 A junior option from Division B or a junior modern language option.  
 An approved junior option.  
 A science or mathematics course or Statistics 205.  
 Physical Education.



**Second Year**

A senior psychology course.

Two approved options, one of which may be a psychology course.

An option from Division A or B.

A science or mathematics or statistics course.

**Third Year**

A senior psychology course.

Two approved senior options, one of which may be a psychology course.

A senior option from Division A or B.

A science or mathematics or statistics course.

**Sociology****First Year**

Sociology 202.

English 200.

Approved junior option.

A junior option from Division B or a language option.

A science or mathematics or statistics course.

Physical Education.

**Second Year**

A Sociology course (open option from Sociology).

Approved Sociology option.

An option from Division A or B.

An option from Division B.

A science or mathematics or statistics course.

**Third Year**

An approved Sociology option (400-level course).

A Sociology option (open).

A senior option from Division B.

An open option.

A science or mathematics or statistics course.



SCIENCE AND ENGINEERING BUILDING

**B.Sc. PATTERNS**

Note: In the first year of the B.Sc. patterns, the foreign language of matriculation may be substituted for English 210, provided English 210 is taken in the second year.

**Special A or B Courses for B.Sc. Students**

In the second and third years, students are required to select one from the following list:

Classics 352, 353 or 356.	Any Foreign Language course other than a beginning course.
Classics 350 or 351 or Classics 354.	Any senior B division Geography course.
Economics 310 or 330.	Old and New Testament Literature.
Linguistics 400.	Philosophy 240, 260, 350, 352, 354, 360.
Russian 350.	Any senior Political Science course.
Italian 350.	Psychology 202, 320.
Any senior English course.	Any Sociology course.
Any senior course in Fine Arts.	
Any senior History course.	

Written permission from the Dean's office must be obtained for registration in any course not listed above.

**Physical Science**

Chemistry, Geography, Geology, Mathematics, Physics

**Chemistry****First Year**

Chemistry 230.  
 Mathematics 201.  
 Physics 240.  
 One of Botany 201, Zoology 220, Geology 201, Geography 201.  
 English 200 or 210.  
 Physical Education.

**Second Year**

Chemistry 350 and Chemistry 370 or 372.  
 Mathematics 304.  
 One of Botany 201, Geology 201, Zoology 220, Physics 340.  
 Special A or B course.

**Third Year**

Chemistry 312.  
 Physics 340, if not already taken, or one of Botany 201, Geology 201, Zoology 220.  
 Special A or B course.  
 An option.  
 An approved C option.

**Geography****First Year**

Geography 201.  
 English 200 or 210.  
 Geology 201.  
 One of Botany 201, Zoology 220.  
 One of Mathematics 200 or 201, Statistics 255, Physics 200, Chemistry 230.  
 Physical Education.

**Second Year**

Geography 300.

Geography 301.

An approved option in Geology.

An approved option in Botany or Zoology.

An approved option in Mathematics or Physics or Chemistry or Statistics.

**Third Year**

Geography 400.

Geography 303, 401, or 405.

Special A or B course.

An option.

Zoology 321 and Botany 321.

**Geology****First Year**

Geology 201.

Chemistry 230.

Mathematics 201.

Physics 240.

English 200 or 210.

Physical Education.

**Second Year**

Geology 351 and 353.

Special A or B course.

One of Botany 201 or Zoology 220.

Physics 340.

**Third Year**

Two of Geology 454, 457, 461 and 464.

Geology 467.

Special A or B course.

An option.

Chemistry 370.

**Mathematics****First Year**

Mathematics 201.

Mathematics 250 or 270 or Statistics 255.

Chemistry 230 or Physics 240.

A junior option from Division C.

English 200 or 210.

Physical Education.

**Second Year**

Mathematics 304.

Mathematics 250 or 270 or 310 or Statistics 255.

Special A or B course.

Two options, at least one from Division C.

**Third Year**

An approved senior Mathematics course (such as Mathematics 330, 360, 404, 430, or Statistics 450).

Special A or B course.

Three options, at least one from Division C.

**Physics****First Year**

Physics 240.

Chemistry 230.

Mathematics 201.

One of Botany 201, Zoology 220, Geology 201, Geography 201.

English 200 or 210.

Physical Education.

**Second Year**

Physics 340, Mathematics 304, Mathematics 310\*

An approved option from Division C.

Special A or B course.

\*Physics 340 and Mathematics 310 may be jointly replaced by Physics 360 and 380, provided that a second-class standing has been obtained in Physics 240 or 242 and in Mathematics 200 or 201.

**Third Year**

Two of Physics 400, 405, 440 or 445\*\*, 520, Astronomy 410 or 478\*\*, Chemistry 370.

Mathematics 404 or 421 and 442.

Special A or B course.

An option.

\*\*Available in Calgary only; credit cannot be given for both Physics 440 and 445, or for both Astronomy 410 and 478.

**Biological Sciences**

Botany, Entomology, Experimental Psychology, Microbiology, Zoology.

**Botany****First Year**

Botany 201.

Zoology 220.

An approved C Division course (Geology 201 recommended).

Chemistry 230.

English 200 or 210.

Physical Education.

**Second Year**

Two approved senior Botany courses.

Special A or B Course.

Chemistry 350.

An approved C Division course\*.

**Third Year**

Two approved senior Botany courses.

Special A or B course.

An option.

An approved C division option\*.

\*Among C Division courses specially recommended for students in the Botany

Pattern are: Physics, if not previously taken, Biochemistry 300, Genetics 351, Statistics 255.

**Entomology****First Year**

Physics 100 or 200.

Botany 201.

Zoology 220.

Chemistry 230.

English 200 or 210.

Physical Education.

**Second Year**

Entomology 301.

Zoology 350.

Special A or B course.

Chemistry 350.

An option, one of the following recommended: a senior Zoology course, Statistics 255, Geology 201 or 353, Botany 300 or 310 or 320, Genetics 351.

**Third Year**

One of Entomology 414, 522 or 556.

Special A or B course.

Three options, the following suggested; Entomology 414, 475, 522, 556 or 560; a senior Zoology course; Geology 201 or 353; Botany 300, 310 or 320; Genetics 351; Microbiology 360; Biochemistry 300.

**Experimental Psychology****First Year**

Psychology 202.  
 Zoology 220.  
 English 200 or 210.  
 A junior chemistry or mathematics or physics course.  
 Statistics 205.  
 Physical Education.

**Second Year**

Psychology 460.  
 Two improved courses in science or mathematics or statistics.  
 A course in genetics or physiology or zoology or biochemistry.  
 Special A or B course.

**Third Year**

A senior psychology course.  
 An approved course in biochemistry or genetics or physiology of zoology.  
 An approved option, which may be a course in psychology.  
 An option.  
 Special A or B course.

**Microbiology****First Year**

Chemistry 230.  
 Mathematics 201 or Statistics 255\*.  
 Physics 200 or Chemistry 250.  
 Botany 201 or Zoology 220.  
 English 200 or 210.  
 Physical Education.

**Second Year**

Microbiology 360.  
 Botany 201 or Zoology 220.  
 Chemistry 350 or Physics 200.  
 A Special A or B course.  
 Biochemistry 300 or a senior option.

**Third Year**

Biochemistry 300 (if not taken previously) or a senior option.  
 Two approved Microbiology options\*\*.  
 A Special A or B course.  
 One option.

\*Mathematics 201 is recommended since this is a prerequisite for Chemistry 370 (Physical Chemistry).

\*\*Approved Microbiology Options: Bacteriology 361.  
 Dairy Science 465.  
 Dairy Science 466.  
 Soil Science 430.  
 Botany 340.

**Zoology****First Year**

Zoology 220.  
 Botany 201.  
 Mathematics 200 or 201.  
 Chemistry 230.  
 English 200 or 210.  
 Physical Education.

**Second Year**

Zoology 300 or 350.  
 Chemistry 350.  
 Physics 100 or 200.  
 An A or B option.  
 An approved C Division option.



**Third Year**

Zoology 300 or 350.

Another senior Zoology course or Zoology 321 or Botany 321.

An A or B option.

An approved Division C option.

An option.

**General Science****First Year**

Chemistry 230.

Physics 100 or 200 or 240.

Mathematics 200 or 201.

Botany 201 or Zoology 220.

English 200 or 210.

Physical Education.

**Second Year**

One senior course in each of two C Division subjects begun in the first year.

Two approved C Division options.

Special A or B course.

**Third Year**

A third course in one of the subjects of concentration followed in the first and second years.

Two senior C Division options.

An option.

Special A or B course.

**COMBINED COURSE LEADING TO THE DEGREES OF B.A. AND LL.B.****First Year**

English 200; Latin 200 or French 200 or German 200; History 210; Economics 200 or Political Science 200 or Philosophy 240; a science or a mathematics or statistics course; Physical Education.

**Second Year**

No student may enter the second year of the combined course unless he has successfully completed the first year with an average of not less than 60%. Five areas of concentration are allowed:

1. Two of Economics 310, 330, 340, 350, or 370.

History 350.

A senior English course or a senior language.

An approved B or C option.

2. Two Political Science 310, 320, 330, 350.

History 350.

A senior English course or a senior language.

An approved B or C option.

3. History 350.

An approved senior History course.

An approved senior Economics or Political Science course.

A senior English course or a senior language.

An approved B or C option.

4. Two approved senior English courses.

History 350.

An approved senior Economics or Political Science course.

An approved B or C option or a senior language.

5. Two approved senior Philosophy courses.

History 350.

A senior English course or a senior language.

An approved B or C option.

**Third Year**

History 450 and the prescription for first-year law.

**Fourth Year**

The prescription for second-year Law. The degree of B.A. may be granted at the end of the fourth year.

**Fifth Year**

The prescription for third-year Law.

Promotion from the second to the third year in the combined course is contingent upon an average of at least 60% in the second year and second class standing in at least four courses, two of which must be in the second year.

**The Degree of Bachelor of Music (B.Mus.)****First Year**

Music 203—History of Music, Choral and Instrumental Techniques.

Music 215—Second Practical Subject; Chorus; Orchestra.

Music 225—First Practical Subject, (Grade IX, Western Board of Music).

Music 250—Elementary Harmony and Counterpoint.

English 200.

Physical Education.

**Second Year**

Music 303—History of Music and Instrumental Technique.

Music 315—Second Practical Subject; Chorus; Orchestra.

Music 325—First Practical Subject (Grade X, Western Board of Music).

Music 353—Harmony, Counterpoint and Orchestration.

An Arts and Science course.

**Third Year**

Music 403—History of Music and Instrumental Technique.

Music 405—Acoustics of Music ( $\frac{1}{2}$  year course).

Music 415—Second Practical Subject (Grade VII, Western Board of Music);  
Chorus; Orchestra.

Music 425—First Practical Subject (Grade XI, A.Mus., Western Board of Music).

Music 453—Harmony, Counterpoint and Orchestration.

Two Arts and Science courses.

Note (I)—**B.Ed. Programs for Holders of Approved Degrees.**

The B.Mus. degree will be accepted by the Faculty of Education as equivalent to the B.A. degree, provided that the holder of the B.Mus. presents at least four Arts and Science courses from outside the Department of Fine Arts, two of which must be senior courses and one of which must be a sequent to a junior course.

Note (II)—**First and Second Practical Subjects.**

All students in the B.Mus. program are required, at the completion of this program, to have had three year of instruction in their First and Second Practical Subjects at the university level.

Students entering the B.Mus. program without the Associate of Music (A.Mus.) diploma of the Western Board of Music, must complete the requirements for this diploma before graduation. Those who complete the requirements for the A.Mus. Diploma in the first year will be required, **either** to complete **two** of Music 503, 513 and 523 before graduation, **or** to proceed to the Licentiate of Music (L.Mus.) Diploma. Those who complete the requirements for the A.Mus. Diploma in their second year will be required to complete one of Music 503, 513, and 523, in their third year.

Students entering the B.Mus. program with the A.Mus. Diploma of the Western Board of Music will be required, **either** to continue study within the Music Division towards the Licentiate of Music (L.Mus.) Diploma, **or** to complete Music 503 in their first year, Music 513 in their second, and Music 523 in their third.

Students entering the B.Mus. program with an Associate in Music Diploma from another recognized institution must complete the A.Mus. Diploma program of the Western Board of Music before graduation.

All students in the B.Mus. program are required to sit for an examination in the First and Second Practical Subjects in December and April of each year.

Students who do not complete the requirements of the First Practical Subject (A.Mus. Diploma) will not be granted their degree. In the case of B.Mus. students lacking this one requirement, a time limit of two years is allowed in order to correct this deficiency which is the students' responsibility.

### Diploma Program in Art

Entrance requirements are the same as for the B.A. program. Prospective students should also be prepared to submit at least **six** original works in any choice of media.

Upon successful completion of the entire four-year program, the Diploma in Art will be conferred. It will contain a statement of one of the following areas of emphasis: (1) Painting, (2) Mural Painting and Decorative Painting, (3) Design and Illustration.

An intermediate diploma will be awarded to students who have successfully completed the first two years of the program.

#### First Year

(1) Principles of Design and Composition .....	Art 230
(2) Fundamentals of Drawing .....	Art 240
(3) Fundamentals of Painting .....	Art 250
(4) Theory of Color .....	Art 255
(5) Drawing from Memory and Knowledge .....	Art 260
(6) Anatomy .....	Art 265

#### Second Year

(1) Pictorial Composition .....	Art 330
(2) Advanced Drawing .....	Art 340
(3) Life Painting .....	Art 350
(4) Theory of Color .....	Art 355
(5) Still Life .....	Art 360
(6) Art History and Appreciation—Survey of Art from the Primitive Period to the Renaissance .....	Art 300

#### Third Year

* (1) Composition and Painting Techniques .....	Art 430
* (2) Life Drawing .....	Art 440
(3) Advanced Painting .....	Art 450
(4) Illustration and Book Decoration .....	Art 466
(5) Mural and Decorative Painting .....	Art 467
* (6) History and Appreciation — Survey of Art in Europe from the Renaissance to Modern Times .....	Art 400
(7) Landscape Painting — Banff School (Summer Session) .....	Art 468
*Compulsory; in addition, two other courses are to be selected.	

#### Fourth Year

* (1) Pictorial Composition .....	Art 473
* (2) Life Drawing .....	Art 474
(3) Life Painting .....	Art 470
(4) Illustration and Book Decoration .....	Art 476
(5) Mural Painting and Decorative Painting .....	Art 477
* (6) Techniques .....	Art 475
(7) Landscape Painting—Banff School (Summer Session) .....	Art 478

\*Compulsory; in addition, one other course is to be selected.

### Degree Program in Architecture

Students planning to study for a degree in Architecture at the University of British Columbia may complete their first year of studies at the University of Alberta, Calgary. Details of entrance and course requirements will be made available from the Arts and Science Faculty office on request.

## GRADUATE STUDIES

Students wishing to pursue work towards the Master's or Doctor's degree should consult the calendar of the Faculty of Graduate Studies.

## DETAILS OF COURSES

### NOTES:—

1. Instructors are listed by departments. The rank in each case is that held in April, 1962.
2. The hours of instruction for both terms of the winter session are shown at the top of each course description. The letter "L" attached to a figure signifies lecture-laboratory-hours, and the letter "S" seminar-hours. The symbol 3/2 means three hours in alternate weeks. Unless otherwise specified, the first figure in each term indicates lecture-hours and the second laboratory-hours.

**The University reserves the right to modify or withdraw for the session any of the courses here outlined**

Regular attendance is expected of students in all courses.

## ACCOUNTING

Instruction offered by members of the Faculty of Commerce.

- 200. Elementary Accounting** (3-2; 3-2)  
This course is designed to present the language of accounting to the student. The course is devoted to the mechanics of accounts and their application to specific conditions which arise in the business world. Attention is directed to the characteristics of the various forms of business organizations and the accounting implications from the standpoint of legal as well as managerial requirements.  
An introductory presentation is made of the principles of auditing and internal control.  
The principles of valuation as applied to inventories, fixed assets, and accounts receivable are considered.  
The topic of financial statement analysis is introduced.

## ANTHROPOLOGY

See under Sociology.

## ART

See under Fine Arts.

## ASTRONOMY

W. H. Stilwell

- 253. Astronomy** (3-0; 3-0)  
Astronomical co-ordinate systems and problems related to them; the solar system; the stars and discussions concerning their origin, energy, structure and motions. The universe, its population and structure. Prerequisite: Mathematics 30.  
Textbook: Baker **Astronomy** (Van Nostrand).
- 478. (Formerly Physics 478) The Physical Universe** (3-3; 3-3)  
B. G. Wilson  
The historical development of astronomy. Introduction to the physics of the earth and its environment. The sun and the solar system; cosmic radiation. Astrophysics and radio astronomy. An introduction to cosmological theory.  
Prerequisites: Physics 240, and 340 or 380 or consent of instructor.

## BOTANY

### STAFF:—

**Associate Professor**—A. R. Prince.

**Assistant Professors**—Charles D. Bird, Theodore Mosquin.

### Junior Course—

- Botany 271. Introductory Botany** (formerly 201) (3-3; 3-3)  
Basic anatomy and physiology of flowering plants. Survey of structure, life-cycles and evolution of the main groups of the plant kingdom.  
Text: **Botany**—Hill, Overholts, Popp and Grove, 1960.

**Senior Courses—**

- 330. Algae, Lichens and Mosses** (3-3; 3-3)  
The structure, life histories and classifications of the Algae, Lichens and Mosses with emphasis on native plants. Consideration is given to the evolution of these plant groups and to their role in nature.  
Prerequisites: Botany 271; or Botany 201; or consent of instructor.
- 370. Flowering Plants** (formerly 300) (3-3; 3-3)  
The origin and evolution of flowering plants; their morphology and classification; species concepts; plants in relation to their environment; principles of nomenclature.  
Prerequisite: Botany 271, or 201; or consent of instructor.
- 371. Plant Anatomy and History** (formerly 310) (3-3; 3-3)  
A course in the structure and development of organs and tissues of the higher plants. Emphasis is placed on the experimental approach to anatomical studies and on the environmental and physiological control of development and morphology.  
Prerequisite: Botany 271 or 201, or consent of instructor.

**CHEMISTRY****STAFF:—****Associate Professor—**J. B. Hyne.**Assistant Professors—**F. C. Adam, D. A. Armstrong, M. H. Benn, P. J. Krueger, T. S. Sorenson, D. F. Tavares.**Instructor—**M. R. S. Weir.**Research Associate—**A. L. Jacobson.

- 230. Inorganic Chemistry** (3-1S-3; 3-1S-3)  
Lectures: The fundamental concepts of chemistry as applied to the elements and their compounds. Textbook: Sienko and Plane, **Chemistry**, 2nd Ed.  
Laboratory: The preparation of compounds, quantitative chemistry and semi-micro qualitative analysis. Textbook: Franz, **A Laboratory Study of Chemical Principles**.  
Prerequisites: Chemistry 130 (1) or Chemistry 30 of High School or equivalent.
- 232. Modern Chemistry** (for engineering students) (3-1S-3; 3-1S-3)  
Lectures: Stoichiometry, atomic and molecular structure, nuclear structure, thermodynamics, inorganic chemistry of important elements, elementary physical chemistry, synthetic organic chemistry and biochemistry. Textbook: Sienko and Plane, **Chemistry**, 2nd Ed.  
Laboratory: Experiments in general chemistry, including some organic chemistry, quantitative chemistry and semi-microanalysis. Textbook: **Frantz, A Laboratory study of Chemical Principles**.  
Prerequisites: Chemistry 130 (1) or Chemistry 30 of High School or equivalent.
- 250 and 350. Organic Chemistry** (3-3; 3-3)  
Lectures: An introduction to a study of compounds of carbon. Textbook: Noller, **Chemistry of Organic Compounds** OR Noller, **Textbook of Organic Chemistry**.  
Laboratory: The preparation of some organic compounds. Textbook: English, **Laboratory Manual of Organic Chemistry**.  
Prerequisites: Chemistry 130 (1) or Chemistry 30 of High School or equivalent.
- 312. Quantitative Analysis** (3-6; 3-6)  
Lectures: Principles and methods of quantitative analysis. Textbook: Fischer, **Quantitative Chemical Analysis**, 2nd Ed.  
Laboratory: Gravimetric, volumetric, colorimetric and electrometric methods of analysis. Prerequisites: Chemistry 230 or 232.
- 370. Elementary Physical Chemistry** (3-3; 3-3)  
Lectures: Fundamental concepts of matter in relation to energy; thermochemistry; properties of gases, liquids and solids; solutions; equilibrium;



phase rule; electrochemistry; colloids; kinetics or reaction. Textbook: Glasstone and Lewis, **Elements of Physical Chemistry**. Laboratory: Physico-chemical measurements. Textbook: **Physical Chemistry Laboratory Manual**, University of Alberta. Prerequisites: Chemistry 230 or 232; Physics 200 or 240; Mathematics 200 or 210.

**374. Physical Chemistry** (for engineering students) (3-3; 3-1)

Lectures: Kinetic theory, thermodynamics, solutions and phase equilibria, colloids and surface chemistry.

Textbook: Glasstone and Lewis, **Elements of Physical Chemistry**.

Laboratory: Physico-chemical measurements.

Textbook: No lab text.

Prerequisite: Chem. 232.

**450. Organic Chemistry** (3-3; 3-3)

Lectures: Continuation of the study of the aromatic and aliphatic compounds. General considerations and mechanisms involved in their reactions.

Textbook: Cram and Hammond, **Organic Chemistry**.

Laboratory: Preparation of some organic compounds.

Prerequisites: Chemistry 230 or 232 and 250 or 350.

Prerequisites or corequisites: Chemistry 370 or 372 and 312.

**455. The Chemistry of Biological Systems** (0-0; 3-0)

Lectures: The structure of the cell including nucleic acids and their role. Proteins and enzymes. Topics in the chemistry of intermediate metabolism. Biokinetics and energetics. Photosynthesis, membrane phenomena and muscle action. A survey course with emphasis on interrelationships rather than rigorous detail.

Textbooks: "Cellular Physiology and Biochemistry" (W. D. McElroy). "The Cell" (C. P. Swanson)—both from "Foundations of Modern Biology Series", (Prentice Hall, 1960). Selected reprints from the Scientific American Series on Biosciences.

Reference: "Principles of Biochemistry"—White, Handler, Smith and Stetten (McGraw-Hill, 2nd Ed. 1959).

Prerequisites: Chem. 230, Chem. 250 or 350 and Zoology 220; or permission of the instructor.

**550. Organic Chemistry** (3-6; 3-6)

Lectures: A continuation of Chemistry 250 or 350. Textbook: Cram and Hammond, **Organic Chemistry**.

Laboratory: Preparation of some organic compounds utilising special synthetic and separation techniques.

Prerequisites: Chemistry 250 or 350, 312 and 370 or 372.

**553. Chemistry of Carbohydrates**—M. H. Benn (0-0; 3-3)

Lectures: A study of monosaccharides, oligosaccharides and polysaccharides, their properties and derivatives. Textbook: Pigman (Ed.), **The Carbohydrates**. Reference: **Advances in Carbohydrate Chemistry**.

Prerequisites: Chemistry 450 or 550.

**555. Theoretical Organic Chemistry**—J. B. Hyne (3-0; 0-0)

Lectures: The application of current theories of the mechanism of various types of organic reactions. Textbook: Gould, **Mechanism and Structure in Organic Chemistry**.

Prerequisites: Chemistry 550.

**559. Natural Products**—M. H. Benn (3-0; 0-0)

Lectures: The chemistry of some alkaloids, terpenoids, steroids and microbial metabolic products; structural determination; possible modes of biogenesis and synthesis of some of these compounds will be discussed. Textbook: No single text—extensive reading of literature will be required.

Prerequisites: Chemistry 550.

(Not offered in 1962-63).

- 575. Gas Kinetics**—D. A. Armstrong (3-0; 0-0)  
Lectures: Empirical treatment of reaction rates, collision theory, transition state theory, chain reactions, some specific reaction mechanisms. Textbook: Frost and Pearson; **Kinetics and Mechanism**, 2nd Ed. Reference: **Foundations of Chemical Kinetics**.  
Prerequisites: Chemistry 370 or 372.
- 570. Chemical Thermodynamics**—A. L. Jacobson (3-0; 0-0)  
Lectures: Application of the three laws of thermodynamics to chemical systems; thermodynamics of systems of variable composition. Textbook: Glassstone, **Thermodynamics for Chemists**.  
Prerequisites: Chemistry 372.
- 583. Quantum Mechanics**—F. C. Adam (0-0; 3-0)  
Lectures: An elementary course in quantum mechanics with applications to chemical systems. Textbook: Eyring, Walter, Kimball, **Quantum Chemistry**.  
Prerequisites: Chemistry 370 or 372.  
(Not offered in 1962-63).
- 585. Solution Kinetics**—J. B. Hyne (3-0; 0-0)  
Lectures: The study of chemical reactions in non-polar and polar solvents. Discussion of solvation phenomena. Textbook: Frost and Pearson, **Kinetics and Mechanisms**.  
Prerequisites: Chemistry 372, 555.  
(Not offered in 1962-63).
- 593. Spectroscopy and Molecular Structure**—P. J. Krueger (0-0; 3-0)  
Lectures: A study of the spectral characteristics of matter. This will include the application of ultra-violet, visible, infrared, microwave, Raman, atomic, N.M.R. and E.S.R. spectroscopy to problems of molecular structure. References: West, **Chemical Applications of Spectroscopy, Vol IX**; Baumann, **Absorption Spectroscopy**; Rao, **Ultraviolet and Visible Spectroscopy**.  
Prerequisites: Chemistry 450 or 550 and Chemistry 370 or 372.
- 591. Radiation Chemistry**—D. A. Armstrong (0-0; 3-0)  
Lectures: Brief discussion of radiation sources, interaction of radiation with matter, chemical effects of radiation. References: Hine and Brownell, **Radiation Dosimetry**; Friedlander and Kennedy, **Radio and Nuclear Chemistry**; Haissinsky, **The Chemical and Biological Action of Radiations**; Burton et al, **Comparative Effects of Radiation**.  
(Not offered in 1962-63).
- 587. Infrared and Raman Spectra**—P. J. Krueger (0-0; 3-0)  
Lectures: The relation of infrared and Raman spectra to molecular structure, experimental techniques, and effect of solvent and other factors influencing spectra. Current research literature in the field will be stressed. References: West, **Chemical Applications of Spectroscopy, Vol. IX**; Bruegel **Introduction to Infrared Spectroscopy**.  
Prerequisites: Chemistry 370 or 372, or permission of instructor.  
(Not offered in 1962-63).
- 602. Departmental Research Seminar**—Staff (2S-0; 2S-0)  
Lectures: Reports on studies of the literature or of current research in the department. Required of all graduate students in chemistry.
- 655. Chemistry of Biological Systems**—Staff (0-0; 3-0)  
(See 455 course description).

### CLASSICS

Professor—A. D. Winspear.

#### Latin

#### Junior Courses—

- 200. Latin Authors and Prose Composition** (3-0; 3-0)  
Caesar, *De Bello Gallico*, Book IV (Shuckburgh: Macmillan); Cicero, *An Easy Selection from Cicero's Correspondence* (Duff: Macmillan); Vergil, *Aeneid*, Book II (Sidgwick: Macmillan). **Latin Prose Composition** (Franklin and Bruce: Longman, Green and Co.). For students with matriculation in Latin or with Latin A or 100.

**Senior Courses—**

- 300. Latin Authors and Prose Composition—**A. D. Winspear (3-0; 3-0)  
**A Latin Reader** (Petrie: Oxford); **Latin Prose Composition** (Bradley's Arnold, Ed. Mountford). Sight translation and principles of language. For students proceeding from Latin 200.

**Honor and Graduate Courses—**

- 503. Lucretius, De Rerum Natura** (not offered in 1962-63) (3-0; 3-0)  
**505. Vergil, Complete Works** (3-0; 3-0)  
 (Not offered in 1962-63)  
**511. Advanced Latin Prose Composition—**A. D. Winspear (1-0; 1-0)

**Greek****Junior Courses—**

- 100. Beginners' Greek** (5-0; 5-0)  
**An Introduction to Greek** (Crosby and Schaeffer, Allyn and Bacon); **A Greek Reader** (Colson, Macmillan).

**Senior Courses—**

- 300. Greek Authors and Prose Composition—**A. D. Winspear (3-0; 3-0)  
**A Greek Reader** (Colson); Homer, Selections from the *Iliad*. **Greek Prose Composition** (North and Hillard: Rivington).  
**382. Thucydides, Euripides, Plato—**A. D. Winspear (3-0; 3-0)  
 Thucydides, Book I (Marchant: MacMillan); Euripides, *Bacchae*, Dodd (Oxford), Plato, *Apology*.  
 (Not offered in 1962-63).

**Honor and Graduate Courses—**

- 501. Plato** (not offered in 1962-63)  
**504. Greek Drama—**(not offered in 1962-63). (3-0; 3-0)  
 Greek Drama. Aeschylus *Agamemnon*; Sophocles, *Philoctetes*; Euripides *Bacchae*, Aristophanes *Knights, Clouds*.  
**505. Aristotle—**Nicomachaeon Ethics (3-0; 3-0)  
 A. D. Winspear  
**511. Advanced Greek Prose Composition** (not offered in 1962-63) (3-0; 3-0)  
 Survey Courses in the Life and Thought of the Ancient World.

- Classics 346. Religion in Classical Times—**A. D. Winspear (3-0; 3-0)  
 An historical and philosophical survey.  
 Lectures will be given on the totemic background of ancient religion, Matriarchy, the Homeric Pantheon, the Chthonic deities, the Mystery Religions, the Religion of Numa, Gnosticism, Sycretism.  
 Reference: Guthrie—*The Greeks and their Gods*; Ward Fowler—*The Religious Experience of the Roman People*.

- Classics 352. History of Ancient Greece: The Influence of the Greek Genius on the Western World—**A. D. Winspear (3-0; 3-0)  
 (Not offered in 1962-63).  
 The story of the Hellenic world from its beginnings in the Minoan-Mycenaean civilizations of Crete and Greece and until the time of Alexander the Great with special attention to the political organization of the city-state and the beginnings of democracy, and to cultural and economic development.  
 Textbook: Trever, *History of Ancient Civilization*, Vol. I.

- Classics 353. Roman History: The Roman Genius in the Mediterranean World—**A. D. Winspear. (3-0; 3-0)  
 A study of the development of the Roman Republic and its expansion from city-state to empire. Particular attention will be given to the Roman methods of organization, law and government, and to the way in which the Romans impressed their culture on the Mediterranean world and on Western Europe.  
 Textbook: Trever, *History of Ancient Civilization*, Vol. II.

## ENGLISH

**Professor**—M. H. Scargill.

**Associate Professors**—E. F. Guy, W. H. Magee.

**Assistant Professors**—I. Adam, Jean Alexander, J. Brooks, B. A. King,  
D. E. Ray, M. Taylor, R. Tener.

**Lecturer**—Lorna Challis.

**Sessional Lecturer**—A. Cairns.

## Junior Courses—

- 240. A survey of English Literature** (3-0; 3-0)  
A survey of English Literature from Chaucer to the present day. Frequent essays will be set to afford practice in composition. Texts: **The Literature of England**, Vols. I and II, 4th Edition, ed. Woods; **English Masterpieces, Modern Poetry**, Volume 7, ed. Mack, Dean, and Frost (Prentice-Hall, 1961); **Harbrace College Handbook** (5th edition).  
(English 240 is a prerequisite for senior English courses).
- 250. A course in English for Students in Engineering** (2-0; 2-0)  
Texts: To be announced.

## Senior Courses—

- 312. Old and Middle English**—E. F. Guy and M. H. Scargill (3-0; 3-0)  
Selections from the prose and poetry of the Old and Middle English periods. Texts: M. Anderson and B. C. Williams, **Old English Handbook** (Houghton Mifflin); K. Sisam, **Fourteenth Century Verse and Prose** (Oxford); Chaucer, **Complete Works**, ed. Robinson (Houghton Mifflin, 1957).  
(Not offered 1962-63.)
- 334. Elizabethan and Jacobean Drama**—E. F. Guy (3-0; 3-0)  
A study of English Drama from 1580 to 1642. Among the dramatists to be studied will be Kyd, Marlowe, Shakespeare, Jonson, Webster, and Ford.  
Texts: To be announced.
- 342. The Seventeenth Century**—D. E. Ray (3-0; 3-0)  
Selections from the prose and poetry of the Seventeenth Century. Texts: R. J. C. Grierson, **Metaphysical Poetry** (Oxford); John Milton: **Prose Selections**, ed. M. Y. Hughes (Odyssey Press); **The Poems of John Milton** (Oxford Standard Authors); Browne, **Religio Medici** (Everyman's); Burton, **Anatomy of Melancholy**; Bunyan, **Pilgrim's Progress**.
- 348. Restoration and Eighteenth Century Literature**—B. King (3-0; 3-0)  
Special study of representative works of Rochester, Dryden, Swift, Pope, and Johnson, with additional reading in the drama, poetry, and prose of the period.  
Texts: Rochester, **Poems** (Muses' Library); Dryden, **Selected Works** (Rinehart); Dryden, **Plays** Vol. I (Mermaid); Congreve, **Plays** (Mermaid); Swift, **Gulliver's Travels** (Rinehart); Swift, **Selected Prose and Poetry** (Rinehart); **The Spectator**, Vol I (Everyman's); Pope, **Selected Poetry and Prose** (Rinehart); Johnson, **Rasselas, Poems, and Selected Prose** (Rinehart); Goldsmith, **Poems and Plays** (Everyman's).
- 356. Poetry and Prose of the Romantic Period** (3-0; 3-0)  
(Not offered in 1962-63).  
Selections from Crabbe, Cowper, Burns, Blake, Wordsworth, Coleridge, Scott, Lamb, Hazlett, De Quincey, Byron, Shelley, Keats.  
Texts: **English Romantic Poetry and Prose**, ed. Noyes (Oxford U.P.).
- 364. Poetry of the Victorian Period** (3-0; 3-0)  
R. Tener.  
The works of Tennyson, Browning, Arnold, and other Victorian poets.  
Text: **Victorian Poetry and Poetics**.  
ed. Houghton and Strange (Houghton-Mifflin).
- 384. Canadian Literature**—W. H. Magee (3-0, 3-0)  
A historical and critical study of the literature of English-speaking Canada.  
Texts: To be announced.
- 386. The Development of Modern English**—M. H. Scargill (3-0; 3-0)  
The study of the nature and the development of the sounds, grammar, vocabulary, and spelling of the English language.

Texts: A. C. Baugh, **History of the English Language** (Appleton-Century); S. Robertson and F. Cassidy, **The Development of Modern English** (Prentice-Hall).

- 391. A Survey of the English Novel**—Ian Adam (3-0; 3-0)  
A study of the English novel from Defoe to the present day.  
Texts: To be announced.

- 394. English Literature of the North American Continent**—J. Alexander (3-0; 3-0)  
A selection of representative major writers.  
Texts: Melville, **Moby Dick; Selected Tales and Poems** (Rinehart); Poe, **Selected Writings** (Riverside); Emerson, **Selected Prose and Poetry** (Rinehart); Thoreau, **Walden. On the Duty of Civil Disobedience** (Rinehart); Hawthorne, **The Scarlet Letter; Selected Tales and Sketches** (Rinehart); Whitman, **Leaves of Grass and Selected Prose**; Mark Twain, **Portable Twain** (Viking-Macmillan); James, **Portable Henry James** (Viking-Macmillan); Crane, **The Red Badge of Courage and other Writings** (Riverside); Dreiser, **An American Tragedy** (Dell); Cummings, **The Enormous Room** (Modern Library); Faulkner, **The Sound and the Fury and As I Lay Dying** (Modern Library); Hemingway, **The Old Man and the Sea** (Scribner's); O'Neill, **Three Plays of Eugene O'Neill** (Modern Library); Miller, **Death of a Salesman** (Compass); Eliot, **Selected Poems** (Penguin); **New Pocket Anthology of American Verse** (Pocket Books); Weaver, ed., **Canadian Short Stories** (Oxford); **Penguin Book of Canadian Verse** (Penguin); Mitchell, **Who Has Seen the Wind** (Macmillan).

- 398. (54.) Children's Literature** (3-0; 3-0)  
A historical and critical study of literature written for children with attention to the interaction between children's literature and educational theory. The course will bring to the attention of prospective elementary teachers some of the world's resource in good books for children.  
Texts: **The Arbutnot Anthology of Children's Literature** (Scott Foresman Co.).  
Prerequisite: English 240 or 200 or 210.  
(Not offered in 1962-63).

#### Honors and Graduate Courses—

(1S-0; 1S-0)

- 501. Seminar—Second Year, Honors English.**

- 552. Conference Course** (3-0; 3-0)  
English 552 offers guidance in special reading courses in any field of English Literature. It is designed to fill in background studies for theses.

#### FINE ARTS

**Associate Professors**—F. E. Churchley, H. B. Stadelbauer.

**Assistant Professors**—E. M. Dodd, Q. D. Doolittle, S. G. Finn, H. M. Kiyooka.

#### Art

- 230. (35) Principles and Design and Composition** (1-4; 1-4)  
Helen B. Stadelbauer

The study and practical application of principles of composition and picture-making, methods of construction in design, and the use of conventional and abstract forms.

- 240. (40) Fundamentals of Drawing** (3-3; 3-3)  
Eric Dodd

Theory and practice of drawing; analysis of masters' drawings; study of line, form, pattern, light and shade; portrait and figure construction; life drawing, using both long and quick poses.

Textbook: Nicolaides, **The Natural Way to Draw**.

- 250. Fundamentals of Painting** (3-3; 3-3)

Theory and practice of painting in oils; forms in space; analysis of line, pattern and form in painting; study of arrangements, both two-dimensional and three-dimensional; use of light and shade; application of pigments in both monochrome and color.

Prerequisite: Art 240.

- 300 Art History and Appreciation.** (3-0; 3-0)  
 A general survey of architecture, painting and sculpture and minor arts in the following periods: Primitive, Egyptian, Greek, Etruscan, Roman, Byzantine, Celtic, Romanesque, Gothic and Italian Renaissance.  
 Analysis of compositions by the great masters of the various schools of painting.  
 Textbook: Gardner, **Art Through the Ages**.
- 330 (53) Pictorial Composition** (2-3; 2-3)  
 Helen B. Stadelbauer  
 Analysis of master compositions from the various schools of painting; theory and practice in arranging forms, both in the two-dimensional and in space; exercises in figure grouping; conventional treatment of natural forms for decorative painting; uses of various techniques.  
 Prerequisite: Art 40 or 240 (for Arts and Science students), Art 35 or 230, (for Education students).  
 Textbook: Rasmusen, **Art Structure**.

## MUSIC

Dr. F. E. Churchley and Associates

- 200. (35 or 41) History of Music and Choral Technique** (2-3\*; 2-3\*)  
 F. E. Churchley  
 Elementary theory and practice of singing, choral technique and interpretation, sight singing and ear training. History of music. Introduction to form. Instruments of the orchestra. Assignments include one hour weekly of prescribed listening; records and scores are provided and the listening room is reserved at various times for small groups. Weekly reading will be assigned, part of it related to the listening.  
 Theory: The student will be required in February (of the session in which the course is taken), to pass an elementary examination in notation with 80% standing.  
 Textbooks: Staton, **Sweet Singing in the Choir**; Martin Bernstein, **An Introduction to Music**; Horwood, **Basis of Music**.  
 \*Laboratory: Choral and listening.  
 Prerequisite: (a) Western Board of Music Grade III theory or equivalent; and  
 (b) Western Board of Music Grade V practical or equivalent.
- 203. History of Music, Choral and Instrumental Techniques** (2-6; 2-6)  
 F. E. Churchley, S. G. Finn.  
 Required of students in the first year of the **Bachelor of Music** program and open only to those students. The same content as Music 200 with the addition of a laboratory in the principles and practice of woodwind instruments. This course is a requisite in the 1st year.
- 215. 2nd Practical Subject** (1-6; 1-6)  
 This course is required in the 1st year of the B.Mus. program.
- 225. 1st Practical Subject** (2-10; 2-10)  
 This course is required in the 1st year of the B.Mus. program.
- 250. (45) Elementary Harmony and Counterpoint—S. Finn** (2-3\*; 2-3\*)  
 Strict and free counterpoint in two and three parts. Diatonic harmony, including secondary sevenths. Modulation. Use of unessential notes of all kinds. Harmonizing of chorales in the style of Bach.  
 musical form and analysis.  
 \*Laboratory: Ear training and keyboard harmony; choral.
- 300. History of Music and Instrumental Technique** (2-6; 2-6)  
 Q. D. Doolittle, S. G. Finn.  
 A study of the history of music from the year 1600 to 1900. Scores and records of music are provided. A critical evaluation of the styles of various



composers is emphasized. The laboratory consists of the study of **brass and woodwind instruments** as applied to band and orchestral groups.

Prerequisites: Music 200 or equivalent.

**303. History of Music and Instrumental Technique** (2-6; 2-6)  
Q. D. Doolittle.

Required of students in the second year of the Bachelor of Music program, and open only to those students. The same content as Music 300 except that the instrumental laboratory is limited to stringed instruments.

Prerequisite: Music 203.

**315. Second Practical Subject** (1-6; 1-6)

Required in the second year of the B.Mus. program.

**325. First Practical Subject** (2-10; 2-10)

Required in the second year of the B.Mus. program.

**350. Harmony and Counterpoint** (2-3; 2-3)  
S. G. Finn.

Strict counterpoint in three parts. Free counterpoint in three parts. Invertible counterpoint, canon and fugal exposition. Chromatic harmony in four parts. Elementary composition.

Prerequisite: Music 250 or equivalent.

**353. Harmony, Counterpoint and Orchestration.** (2-4; 2-4)  
S. G. Finn.

Required of students in the second year of the **Bachelor of Music** program and open **only** to those students. The same content as Music 350 with the addition of a **laboratory in orchestration**.

Prerequisite: Music 250 or equivalent.

**400. History of Music and Instrumental Technique.** (2-5; 2-5)  
F. E. Churchley, Q. D. Doolittle.

A study of the history of music with special emphasis on the Middle Ages, Renaissance and the Twentieth Century. A weekly seminar is provided at which assigned topics are discussed. The laboratory consists of the study of stringed instruments as applied to orchestral groups.

Prerequisite: Music 300 or equivalent.

Textbooks: Catalyne, *An Outline of the History of Music*. Parrish and Ohl, *Masterpieces of Music before 1750*.

## GEOGRAPHY

**Assistant Professors:** F. W. Boal, J. G. Nelson.

### Courses:

**Geography 201—Staff** (3-2; 3-2)

Physical Geography—A systematic study of the origin, nature, and distribution of the natural environment. Land forms, weather and climate, vegetation, soils, water and mineral resources will be related to each other in place. The laboratory work will complement the lectures and will include interpretation, study, and preparation, of maps and charts.

NOTE: This is a C Division course.

**Geography 300—J. G. Nelson** (3-0; 3-0)

Human Geography—The significance of human distribution on the earth. Man's relation to the physical environment; world population problems; cultural patterns in the world; aspects of political and economic geography in selected world trouble areas; racial geography and urban geography. Students planning on taking this course are strongly urged to precede it by Geography 201.

NOTE: This course carries senior credit as a B Division option.

**Geography 301.** (6L; 6L)

Cartography—Aspects of surveying, including field work with the plane table; the major projections, their construction and application to cartographic purposes; the representation of statistical data on graphs, diagrams and maps; the photogrammetric methods and the identification and interpretation of landscape features from aerial photographs; the fundamentals of drafting, lettering, map layout and reproduction.

NOTE: This is a C Division course.

- Geography 302**—W. F. Boal (3-0; 3-0)  
 Economic Geography—A study of the distribution of economic activities over the world. Resources, industries, and trade patterns are reviewed systematically and in place.
- Geography 400** (3-0; 3-0)  
 Anglo-America—The Regional geography of Canada and the United States. The physical framework of these countries and its significance in their historical development; the concept of the geographic region, the pattern and characteristics of these regions, with selected detailed studies.  
 Prerequisite: A previous course in geography, or consent of instructor.
- Geography 407**—J. G. Nelson (2L-1s; 2L-1s)  
 Advanced Physiography—The study of physiographic processes in both natural and artificial (man-affected) settings. Content will range from reading on physiographic problems to field mapping and research in the local area.  
 Prerequisite: Consent of the Instructor.  
 NOTE: This is a C Division course (To be offered in Calgary).
- Geography 412** (3-0; 3-0)  
 Latin America—A survey of the physical features of Middle and South America, followed by consideration of aboriginal peoples, settlement by the Europeans and a regional analysis of the individual countries.  
 Prerequisite: A course in geography, or consent of the instructor.  
 (Not offered in 1962-63).
- Geography 424**—F. W. Boal (2-1s; 2-1s)  
 Resource Conservation—Principles of conservation and their application at the international, national and local levels. Student problems will be assigned.  
 Prerequisite: A previous course in Geography or consent of the Instructor.
- Geography 502**—Staff  
 Reading and Seminar Course.
- Geography 551**—J. G. Nelson  
 Research in Physical Geography.

## GEOLOGY

**Associate Professor**—S. J. Nelson.

**Assistant Professor**—T. A. Oliver.

**Sessional Instructor**—A. McGugan.

- 201. General Geology**—T. A. Oliver (3-3; 3-3)  
 Processes of destruction and reconstruction; interpretation of physiographic features with map study; stratigraphic column with index fossils from each period; common minerals and rocks.  
 Textbook: Gilluly et al, **Principles of Geology**.
- 230. Introductory Geology** (for Engineering Students) (2-0; 2-0)
- 302. Geology of Canada** (3-3; 3-3)  
 Geology of the physiographic provinces of Canada, including stratigraphy, structure, mineral deposits and historical geology, with emphasis on Western Canada. Rock and mineral identification; interpretation of geologic maps; paleontology—distribution and evolution of the various animal and plant groups from Precambrian time to Recent.  
 Textbooks: Clark and Stearn, **Geological Evolution of North America, Geology and Economic Minerals of Canada**, 4th edition, G.S.C.
- 351. Mineralogy**—T. A. Oliver (3-3; 3-3)  
 Principles of crystallography; physical and chemical properties of minerals.  
 Textbook: **Berry and Mason "Mineralogy"**.
- 353. Paleontology** (3-3; 3-3)  
 Principles of classification; comparison of fossil with modern forms; classification and study of fossil invertebrates, vertebrates and plants.  
 Textbook: Schrock and Twenhofel, **Principles of Invertebrate Paleontology**.
- 609. Geological Research**
- 230. Introductory Geology** (for Engineering Students) (2-0; 2-0)

## HISTORY

**Professor:** F. G. Heymann.

**Associate Professor:** G. M. Self,

**Assistant Professors:** R. A. M. Shields, R. C. Brown.

**Lecturers:** J. A. Boudreau, J. B. Toews.

- 200. European History** (3-0; 3-0)  
The History of Europe from the Decline of the Roman Empire in the West to the present.
- 210. Canada and the United States, 1492-1939** (3-0; 3-0)  
A history of Canada and the United States, including a study of their European origins and relationships.  
N.B. Students will normally take one of the above courses before proceeding to senior courses. In special cases this prerequisite requirement may be waived.
- 300. Mediaeval Europe**—J. B. Toews (3-0; 3-0)  
The rise and development of mediaeval institutions.
- 304. Europe, 1453-1648**—F. G. Heymann (3-0; 3-0)  
Europe in the Age of Renaissance and Reformation.
- 305. Europe from the Peace of Westphalia to the French Revolution** (3-0; 3-0)  
(Not offered in 1962-63).
- 307. Europe, 1789-1870**—G. M. Self (3-0; 3-0)  
The absorption of the French Revolution into the complex of European ideas.  
(Not offered in 1962-63).
- 309. Europe, 1870 to the present**—G. M. Self (3-0; 3-0)  
The immediate background of contemporary Europe.
- 320. France**—R. A. M. Shields (3-0; 3-0)  
The political and social development of France.  
(Not offered in 1962-63).
- 322. Germany**—F. G. Heymann (3-0; 3-0)
- 324. Russia**—J. B. Toews (3-0; 3-0)  
The political and social development of Russia, with emphasis on the period since 1861.
- 327. The Balkans**—G. M. Self (3-0; 3-0)  
A survey, with special emphasis on the Turkish regime and after.
- 350. Britain**—J. A. Boudreau (3-0; 3-0)  
A survey of the history of the British Isles.
- 352. The British Empire and the Commonwealth**—R. A. M. Shields (3-0; 3-0)  
A survey of the history of the British Empire and the Commonwealth.
- 360. The United States, 1492-1951**—J. A. Boudreau (3-0; 3-0)  
A survey, including the colonial period.
- 370. Canada**—R. C. Brown (3-0; 3-0)  
A survey of the political and social history of Canada.  
The following 400 courses can be taken by third-year students, honors and graduate students.  
The prerequisites are one freshman course (200 or 210) and one senior course or special permission by the instructor.  
Those not followed by the name of the instructor will probably not be offered in 1962-63.
- 404. A selected topic from the period of the Renaissance and Reformation.**
- 420. A selected topic from the History of France.**
- 421. A selected topic from the History of Germany**—F. G. Heymann (3-0; 3-0)
- 422. The social thought of the 19th century**
- 440. Africa**—G. M. Self (3-0; 3-0)  
A survey, with special reference to European penetration and African reactions. (Not offered in 1962-63).
- 451. English Mediaeval History**
- 452. History of Tudor and Stuart England**
- 454. Nineteenth Century Britain**—R. A. M. Shields (3-0; 3-0)
- 462. Intellectual History of the United States**—R. C. Brown (3-0; 3-0)

464. **History of American Foreign Relations**  
 475. **History of the Canadian West**  
 473. **A selected topic in Canadian History**  
 490. **Latin America**  
 525. **European Diplomatic History after 1870**—Members of the Department.  
 Open to graduate students.  
 600. **Conference course in special subjects**  
 Open to graduate students.

### MATHEMATICS

**Associate Professors**—A. A. Gibb, J. E. L. Peck, A. Sharma.

**Assistant Professors**—A. S. B. Holland, Moshe Shimrat, S. C. Das, N. Nobusawa.

**Sessional Lecturer**—A. Forbes.

200. **Elementary Mathematics**  
 As Mathematics 201, with addition of plane trigonometry.  
 Text: Brixey and Andree, **Modern Trigonometry** (Holt).  
 This course is intended for students who wish to have a basic course in Mathematics, acceptable as a prerequisite to Mathematics 304, but do not have Mathematics 31 of high school.  
 Prerequisite: Mathematics 30 of high school.
201. **Elementary Mathematics** (3-2; 3-2)  
 Trigonometrical identities and equations. Rates of change. Differentiation and integration of simple functions. Applications. Analytic geometry of the conic sections. Exponential, logarithmic and trigonometric functions. Textbook: Johnson and Kiokemeister, **Calculus with Analytic Geometry** (Allyn and Bacon), chapters 1-11.  
 Prerequisite: Mathematics 30 and 31 of high school.
202. **Elementary Mathematics** (3-2; 3-2)  
 As for Mathematics 201.  
 (This course is for Engineering students.)  
 Textbook: To be selected.
270. **Algebra** (3-0; 3-0)  
 Number system, induction, scales of notation. Algebra of logic and sets. Permutations and combinations, binomial and multinomial theorems. Probability. Matrices and linear transformations.  
 Textbook: Kemeny, Snell and Thompson, **Introduction to Finite Mathematics** (Prentice Hall, 1957).  
 Reference Books: Hall and Knight, **Higher Algebra** (Macmillan); Meserve, **Fundamental Concepts of Algebra** (Addison-Wesley, 1953).  
 Prerequisite: Mathematics 30 of high school.
303. **Calculus and Analytical Geometry** (5-0; 5-0)  
 Polar co-ordinates. Methods and applications of integration. Series. Elements of partial differentiation. Multiple integration. Elements of differential equations.  
 Textbook: Adams and White, **Analytic Geometry and Calculus** (Oxford).  
 Prerequisite: Mathematics 202.  
 (This course is for Engineering students).
304. **Calculus and Analytical Geometry** (5-0; 5-0)  
 Polar and parametric co-ordinates. Methods and applications of integration. Series. Vectors and space geometry. Partial differentiation. Complex numbers. Determinants. Multiple integrals. Elements of differential equations.  
 Textbook: Johnson and Kiokemeister, **Calculus with Analytic Geometry** (Allyn and Bacon)  
 Prerequisite: Mathematics 200 or 201.
306. **Calculus, Analytical Geometry and Linear Algebra** (5-0; 5-0)  
 Polar and parametric co-ordinates. Methods and applications of integration. Series. Vectors and space geometry. Partial differentiation. Multiple in-

tegration. Complex numbers. Elements of differential equations. (These topics treated with somewhat more attention to rigour than in Mathematics 304.) Introduction to linear algebra, including matrices, determinants and vector spaces.

Prerequisite: Mathematics 200 or 201.

Prerequisite or corequisite: Mathematics 270.

Textbooks: Johnson and Kiokemeister, **Calculus with Analytic Geometry** (Allyn and Bacon); Murdoch, **Linear Algebra for Undergraduates** (Wiley).

**NOTE:** This course is required for second year Honours students in Mathematics and Physics. Other students admitted only with the consent of the instructor.

### 310 **Elementary Mechanics** (3-0; 3-0)

Newton's Laws. Plane statics, Systems of forces. Centre of mass. Friction. Principles of virtual work. Thin beams. Plane kinematics and dynamics of a particle. Projectile motion. Circular motion and simple harmonic motion. The conservation laws. Stability of equilibrium. Plane motion of a rigid body. Impulsive motion.

Textbook: J. L. Synge and B. A. Griffiths, **Principles of Mechanics**, (third edn.) (McGraw Hill).

Prerequisite: Mathematics 200 or 201.

Corequisite: Mathematics 304 or 306.

### 354. **Statistics**

Graphs, tables, diagrams. Frequency distributions, averages, dispersion, skewness. Moments, normal law, regression, simple correlation, multiple correlation, applications to data in various fields. Sampling methods, time series, seasonal and cyclical variations, index numbers, tests of significance.

Textbook: Kenney and Keeping, **Mathematics of Statistics**, Part I.

Prerequisite: Mathematics 30 of high school.

(This course is for students in the Faculty of Commerce).

### 404. **Advanced Calculus** (3-0; 3-0)

Vector analysis. Ordinary differential equations. Series solutions of differential equations. Gamma, Bessel and Legendre functions. Fourier series. Boundary value problems.

Textbook: To be selected.

Prerequisite: Mathematics 304.

### 552. **Quantum Theory**

### 604. **Measure Theory**—J. E. L. Peck

(3-0; 3-0)

### 630. **Topology**—M. Shimrat

### 690. **Advanced Field Theory**—M. Takeo

Courses in Statistics are listed below under the general heading: "Statistics."

## MODERN LANGUAGES

**Assistant Professors**—A. Harms (French), Freda Jensen (French), Germaine l'Abbe (French), J. E. Oyler (German), R. Breugelmanns (German), D. Bresky (French).

### French

**Sessional Instructors**—A. King, M. Monod.

### 200. **First Year University French** (3-1; 3-1)

This is an intensive course in reading modern French, French grammar and composition.

Prerequisites: Grade XII French or French 100.

### 330. **French Language and Civilization** (3-0; 3-0)

Pronunciation: Sounds of the French language; the International Phonetic Alphabet; drill in basic speech patterns.

Grammar: A general review with emphasis on those constructions in which French usage differs from English; translation from French to English and from English to French.

Civilization: Aspects of contemporary French life and letters; specimens of post-war prose and verse.

Prerequisite: French 200.

**Note:** This course, designed for teachers and prospective teachers, will not overlap, or serve as a substitute for, Education 280S or 280Su (French section).

**350. Second Year French Authors and Grammar** (3-0; 3-0)

The study of representative literary works from the Middle Ages to the present day; oral and composition work based on the texts studied. The principal authors are Villon, Ronsard, Moliere, Voltaire, Baudelaire, Maupassant and Camus. An intermediate course.

Prerequisite: French 200.

**370. Romantic Period** (3-0; 3-0)

A study of the sources and history of French romanticism: Mme de Stael, Chateaubrian, Lamartine, Hugo, Musset, Vigny.

**400. Seventeenth Century** (3-0; 3-0)

This course consists of a study of the literature and society of the seventeenth century in France. The classical theatre: Corneille, Moliere, Racine; the novel; Descartes; Pascal; La Rochefoucauld and La Bruyere; La Fontaine. Prerequisite: One senior French course.

### German

**100. or A Beginners' German** (3-2; 3-2)

This course is designed to impart, on the introductory level, an active practical skill in the use of the spoken and written word. The oral approach will be stressed, using material from every-day situations, easy cultural readers, slides, maps, etc. The Department's language laboratory will be used for drill purposes and will be available to students for individual practice.

**200. First Year University German** (3-1; 3-1)

This course is devoted to the development of the student's ability in speaking, reading and writing German, using modern short stories, cultural readers and visual aids.

Prerequisite: Matriculation German, German 100 or the equivalent.

**210. Scientific German** (3-0; 3-0)

This course will cover the elements of German grammar. It aims to give students a reading knowledge of easy scientific German. It is especially designed to meet the needs of honors students from science departments, students of the professional faculties and graduate students who require a knowledge of scientific German.

**330. German Language and Culture** (3-0; 3-0)

A study of German phonology, grammar and style. Lectures and assigned reading on German life, literature and civilization.

Prerequisite: German 200 or consent of the Department.

**350. Survey of German Literature** (3-0; 3-0)

A general survey, a study of selected periods and of major works of German literature. A review of grammar, oral and composition work.

Prerequisite: German 200 or consent of the Department.

**370. German Literature of the Eighteenth Century** (3-0; 3-0)

A study of the historical and cultural background of the eighteenth century, of Rationalism, Sturm und Drang, Classicism, and the beginnings of Romanticism. Foreign influences on German literature. Lectures, discussions and reports will be based on selected works of Lessing, Goethe and Schiller. Composition and oral work.

Prerequisite: German 200 or consent of the Department.

(Not offered in 1962-63).

**400. German Literature of the Nineteenth Century** (3-0; 3-0)

This course consists of a study of the leading exponents of nineteenth century drama, fiction and poetry, including the background of Romanticism, of



The Young Germany Movement, of Realism, and of Naturalism. A careful study is made of the characteristic qualities of the writers and their contributions to German literature. Lectures, discussions and individual reports. Prerequisites: One senior German course or consent of the Department.

## PHILOSOPHY

**Professor**—A. D. Winspear.

**Associate Professor**—R. N. Anderson.

**Assistant Professors**—J. W. Heintz, P. S. Mamo.

### Junior Courses—

**240. Introduction to Western Philosophy** (3-0; 3-0)

R. N. Anderson, P. S. Mamo, J. Heintz.

This course is designed to introduce the student to the main problems and theories that have dominated philosophical thought in the Western world, through the study and discussion of selected philosophical classics. Emphasis will be placed both upon a sound acquaintance with the main outlines of our philosophical tradition and upon the ability to handle philosophical ideas independently. To this end both lectures and discussions will form part of the student's training.

**260. Introduction to Logic, Semantics and Scientific Method** (3-0; 3-0)

J. Heintz

This course introduces the student to the various types of rational argument and proof, and subsequently undertakes an elementary examination of theories of meaning and truth. Its general purpose is to show how to distinguish between sound and unsound beliefs and thus to serve as an introduction to philosophical method.

### Senior Courses—

**340. Greek Philosophy**—P. S. Mamo (3-0; 3-0)

**344. Contemporary Philosophy**—J. Heintz (3-0; 3-0)

A discussion of the main currents of present-day philosophical thought. Prerequisite: Philosophy 240.

**346. Religion in Classical Times**—A. D. Winspear (3-0; 3-0)

Lectures will be given on the totemic background of ancient religion, Matriarchy, the Homeric Pantheon, the Chthonic deities, the Mystery Religious Experience of the Roman People.

References: Guthrie, *The Greeks and Their Gods*; Warde Fowler, *The Religious Experiments of the Roman People*.

**354. Ethics**—P. S. Mamo (3-0; 3-0)

An inquiry into the nature and justification of moral standards.

**360. Symbolic Logic**—J. Heintz (3-0; 3-0)

This course treats the following topics: inference and argument; validity and Consistency; the sentential calculus; the predicate calculus; the calculus of identity; the theory of descriptions; formalization of logic and the axiomatic method; syntax and semantics; the deduction theorem; the Post and Hilbert-Ackermann consistency proofs; concepts of independence and completeness of a formal system; elementary theory of sets (classes); Boolean algebra and existence-free logics.

Prerequisite: A previous course in Philosophy, or consent of instructor.

## PHYSICS

**Associate Professors**—C. E. Challice, B. G. Wilson, H. A. Buckmaster, F. Terentiuk.

**Assistant Professor**—J. R. Prescott.

**Sessional Lecturer**—A. E. Stevens.

**341. Physical Science**—F. Terentiuk (3-0; 3-0)

A course designed for B.A. and B.Ed. students to give them some appreciation of fundamental ideas and methods in the physical sciences, of modern trends in this field, and of its relation to other disciplines. Illustrative material will be taken from Physics, Chemistry, Astronomy and Geology, and the history and development of the subject will be stressed.

Text: To be announced.

**NOTE:** This course is not open to first year students, and may be taken for credit by students who have already taken Physics 100 or 200.

- 100. General Elementary Physics** (3-3; 3-3)
- 200. General Physics—C. P. Nehra** (3-3; 3-3)  
A general course in the fundamentals of physics, including mechanics, properties of matter, heat, sound, electricity and light. Illustrated by experiments.
- 238. Physics—Mechanics, Electricity and Magnetism** (3-3/2; 2-3/2)  
Instructor to be announced.  
For students in first year Engineering.
- 240. Physical Properties of Matter, Heat and Sound—C. E. Challice** (3-3; 3-3)  
Mechanics, properties of matter, heat, wave-motion and sound. Illustrated by experiments.  
Textbook: Sema and Katz, **Physics**.  
Reference books: Mendenhall, Eve, Keys and Sutton, **College Physics**; Edser, **Heat for Advanced Students**; Lemon and Ference, **Analytical Experimental Physics**.  
Corequisite: Mathematics 201. (Mathematics 200 may be accepted by special permission.)
- 242. Physical Properties of Matter, Heat and Sound** (3-3; 3-3)  
This course covers the same topics as Physics 240, with a more analytical approach, suitable for Honors students.  
Textbook: To be announced.  
Corequisite: Mathematics 201.  
**NOTE:** This course is required for pre-honors students in Physics, Physics and Geology, Mathematics. Other students may be admitted by permission of the instructor.
- 340. Light, Electricity and Magnetism—H. A. Buckmaster** (3-3; 3-3)  
A course designed to follow Physics 238 or 240, and to give foundation in physics suitable for work in other physical sciences and in engineering. Electrostatics, potential, capacitors, D. C. circuits, magnetism and magnetic field, electromagnetism, induced E.M.F., self-inductance, introduction to alternating currents. Physical optics, interference and diffraction, spectra, atoms and electrons.  
Textbook: Sears and Zemansky, **University Physics**, Part II.  
Prerequisites: Physics 238 or 240, Mathematics 200 or 201.
- 360. Optics and Mechanics—C. E. Challice and H. A. Buckmaster** (3-3; 3-3)  
Geometrical theory of optical instruments; simple wave theory of light and sound. Statics, dynamics of a particle and of a rigid body.  
Textbooks: Robertson, **Introduction to Optics**; Lindsay, **Physical Mechanics**.  
Prerequisites: Physics 238 or 240 or 242; Mathematics 200 or 201.  
Corequisite: Mathematics 304.
- 380. Magnetism and Electricity—F. Terentiuk** (3-3; 3-3)  
Electrostatics and magnetostatics; field and potential theory; D.C. circuits and instruments; chemical, and thermal, E.M.F.; properties of dielectrics and capacitance; electrostatics; induced E.M.F.; inductance; magnetic properties of matter and ferromagnetism; A.C. circuits.  
Textbook: Duckworth, **Electricity and Magnetism**.  
Reference books: Leob, **Fundamentals of Electricity and Magnetism**; Gilbert, **Electricity and Magnetism**; Curtis, **Electrical Measurements**.  
Prerequisites: Physics 238 or 240 or 242 and Mathematics 200 or 201.  
**NOTE:** Physics 340 and 380 are alternative courses, only one of which may be taken.

- 400. The Development of Modern Physics**—J. R. Prescott (3-3; 3-3)  
A study of the historical background of modern physics, emphasizing the development of current theoretical conceptions and modern experimental methods. Topics will include: kinetic theory of matter; electrical conduction, electrons and electron tubes; electrical and neutral particles; radiation and the quantum theory; radio-activity and nuclear atomic energy; cosmic rays; relativity.  
Textbook: To be announced.  
Reference books: Stranathan, **The Particles of Modern Physics**; University of Pittsburgh, **Atomic Physics**.  
Students will also be required to read at least one of a list of semi-popular books on the history or the philosophy of physics.  
Prerequisite: Physics 200, or 240 and 340, or 240 and 380, Mathematics 200 or 201.
- 445. Physics**—Radio Physics (3-3; 3-3)  
Instructor—H. A. Buckmaster.  
The application of electromagnetic theory, solid state theory and system analysis to electronic devices. Transmission lines, wave guides and antennas as examples of boundary value problems in electromagnetic theory; electrical and magnetic properties of semi-conductors; Matrix, topological and signal-fluro-graph methods of circuit and system analysis.  
Prerequisite: Physics 340 or 380; Mathematics 304 or 306.  
Corequisite: Mathematics 404 or consent of instructor.
- 573. Physics—Topics in Nuclear Physics** (2-0; 2-0)  
Interactions of radiation with matter, nuclear reactions, nuclear properties, nuclear models. Elementary particles.
- 690. Biophysical Methods**—F. Terentiuk (2-0; 2-0)  
A course covering the theory and application of the techniques in biophysics including light-scattering, electron and X-ray diffraction, electron microscopy, electrophoresis, and radio-biology.
- 692. Problems in Biophysics**—C. E. Challice (2-0; 2-0)  
This course will aim to co-ordinate the concepts of physical science with those of the biological sciences in the study of biological problems.  
Prerequisites: Physics 340 and Zoology 220; or consent of instructor.
- Graduate Courses—**
- 664. The Production and Optics of Free Elementary Particles and Ions**—  
C. E. Challice (2-0; 2-0)
- 678. Cosmic Radiation**—B. G. Wilson (2-0; 2-0)
- 680. Radio Astronomy**—H. A. Buckmaster (2-0; 2-0)

## POLITICAL ECONOMY

**Associate Professor**—E. Burke Inlow, F. R. Anton, F. Englemann.

**Assistant Professors**—A. R. Plotnick, R. Wright.

## Economics

### Junior Course—

- 200. Principles of Economics**  
A survey of various aspects of economics; the nature of economics problems and systems; the functions of money; commercial and central banking; national income analysis; monetary and fiscal policy; pricing under competitive and monopolistic conditions; selected topics in analysis and policy.  
Prerequisite for all senior Economics courses except 310, 311 and 330.

### Senior Courses—

- 300. Micro-Economic Analysis**  
The theory of consumer behavior; price and output determination under competition; monopoly and other market structures; the allocation of resources and resource pricing; the distribution of income.  
Prerequisite: Economics 200 or 302.

**320. International Trade**

An analysis of the theoretical basis of international trade, the theory of balance of payments adjustments and related problems. A survey of the development of the economy of the North Atlantic community in the modern period, with special emphasis on attempts to broaden trade and investments since the end of the Second World War.

Prerequisite: Economics 200 or 302.

**330. Labor Problems**

A survey of the nature of labor economics and labor problems, including the various approaches of organized workers and employers to these problems. The approach of government to labor problems, including industrial disputes and social security. Applications of economic analysis to wages, unemployment and related problems.

**340. Money and Banking**

The principles of money, monetary systems, commercial banking, central banking, monetary theory and policy, foreign exchange.

Prerequisite: Economics 200 or 302.

**350. Public Finance**

A survey of principles and operations relating to government expenditures, revenues and debts. The objectives and techniques of fiscal policy in a theoretical framework, with emphasis on the level of economic activity, distribution of income and allocation of resources.

Prerequisite: Economics 200 or 302.

**370. Industry and Government**

An examination of the structure and functioning of industry; investment and market problems; the relationships of government and industry with special reference to price and output problems.

Prerequisite: Economics 200 or 302.

**380. Macro-Economic Analysis**

National income concepts and determination; the theory of aggregate consumption and investment; business cycle and growth applications of aggregate analysis.

Prerequisite: Economics 200 or 302.

**POLITICAL SCIENCE****Junior Course—****200. Elements of Political Science**

A study of the principles and practices of modern government, with the emphasis on the democratic constitutional state. Among the topics studied are the nature and theory of the state; types of constitutions; the functions and composition of the legislature, executive and judiciary; representation; political parties and pressure groups.

**Senior Courses—****310. History of Political Thought**

A historical and critical survey of the development of political and social philosophy from Ancient Greece to the present time, with selected readings from major political writers.

**320. Government of Canada**

A study of the structure and functioning of the government of Canada, especially of the Commons, the Senate, the Cabinet System, the Civil Service; and the role of political parties.

**340. Soviet Government: Theory and Practice**

A study of Soviet political and social theory, and an analysis of the Soviet political system, with special reference to: The Communist party, political institutions, federalism, foreign policy.

Prerequisite: Political Science 200 or consent of instructor.

(Not offered in 1962-63.)

**360 International Politics**

A study from the viewpoint of political science of the elements and general nature of the relations between modern states. The framework and functioning of international institutions—law, diplomacy and organization—is studied and attention is paid to the political and other forces at work, including the role of power and the efforts to achieve international peace.

**371. Governments of the United Kingdom and Commonwealth**

A study of the structure and functioning of the government of the United Kingdom, and the adaptation of the Cabinet System in selected countries within the Commonwealth.

**381. Governments of France and Germany**

A study of the structure and function of the governments of France and Germany.

**PSYCHOLOGY**

Staff—

**Associate Professor**—A. E. D. Schonfield.

**Assistant Professor**—Michael Humphries.

**Junior Courses—**

**202. An Introduction to General Psychology—Staff** (3-0; 3-0)

A survey of problems, methods and principles in various fields of psychology.

**340 Social Psychology—M. Humphries and D. C. Mills** (3-0; 3-0)

(See Sociology 340)

**352. Development Psychology—M. Humphries** (3-0; 3-0)

A study of behavior as it is related to normal development and aging.

Prerequisite: Psychology 202; or, with the consent of instructor, Psychology 212 or 220.

**364. Conditioning and Learning—A. E. D. Schonfield** (3-3; 3-0)

A study of acquisition, retention and utilization of learned behavior.

Prerequisite: Psychology 202; or, with the consent of instructor, Psychology 212 or 220.

**382. Personality—A. E. D. Schonfield** (3-0; 3-0)

Theoretical approaches to personality; behavior dynamics, determinants of personality biological, organic, experimental, social.

Prerequisite: Psychology 202.

**430. Theory and Practice of Psychometrics** (3-3; 3-3)

The nature of psychological tests, with practical work in administration, scoring and interpretation of tests.

Prerequisites:

Psychology 202 and Statistics 205 or 255 or permission of instructor.

**460. Experimental Psychology—M. Humphries** (3-3; 3-3)

An introduction to the methods and principles of experimental investigation in psychology with laboratory participation in demonstrations and exercises.

Prerequisites: Psychology 202, and Statistics 205 or Statistics 255. (The statistics prerequisite can be taken as a corequisite with the consent of the instructor.)

**SOCIOLOGY**

**Associate Professor**—H. Zentner.

**Assistant Professors**—D. L. Mills, M. Schwartz, D. L. Spence, W. W. Stein.

**Sessional Lecturer**—R. Forbis.

**Sociology**

**Junior Course—**

**202. Introductory Sociology** (3-0; 3-0)

The sociological study of society, social institutions, group behavior, personality formation and social change.

**Senior Courses—**

- 310. Social Science Research Methods** (3-2; 3-2)  
Study and application of the various research techniques used in sociology and related social sciences, with special emphasis on interviewing, questionnaires, attitude scales, sociometric testing, survey and sampling.  
Prerequisite: Consent of Instructor.
- 320. Social Problems** (3-0; 3-0)  
The analysis of social and personal disorganization in relation to social change, culture conflict and value systems.
- 340. Social Psychology** (3-0; 3-0)  
A study of the emergence of personality in various interaction situations; analysis of the relationship of individual and social group. Consideration of the forces underlying the development of the social order, with special attention given to crowds, mobs, panics, manias, cults, fashions, fads, social ideologies, social movements, and other forms of mass behavior.  
Prerequisite: Psychology 202 or Sociology 202 or equivalent.
- 360. Social Class in Modern Society**  
An analysis of social stratification in western society, with reference to the effects of industrialization, and including comparative analysis of primitive societies. Special attention is given to the basis of stratification, the structure and function of social class systems, social mobility, and the special classes in modern society, such as the "managerial class", labor, "power elites", etc.
- 376. Sociology of Religion** (3-0; 3-0)  
Sociological analysis of the institution of religion and religious behavior in preliterate and modern society.
- 390. Industrial Sociology** (3-1; 3-1)  
A sociological analysis of the industrial system; industry and society; the industrial community; management-labour relations; bureaucracy; the sociology of work and the professions; informed organization in the work group.  
(Not given in 1962-63.)
- 414. The Sociology of the School** (3-0; 3-0)  
Study of the school as a social institution in the changing society. (This course is the same as Education 414. See Faculty of Education.)
- 430. History of Sociological Thought** (3-0; 3-0)  
The historical roots of sociology, beginnings of modern sociology, and the development of sociological theory to present times.  
Prerequisite: Sociology 202.

**Honor and Graduate Courses—**

- 502. Conference Course in Sociology for Honors and Graduate Students** (3-3; 3-3)  
Arranged for various topics of sociology on the basis of special interest and need. Consent of the instructor required.

**ANTHROPOLOGY****Junior Course—**

- 202. Elementary Anthropology** (3-1; 3-1)  
An introduction to the field of anthropology, including human paleontology, race, human prehistory, linguistics and ethnology.

**Senior Courses—**

- 220. North American Archeology** (3-1; 3-1)  
A general survey course in the pre-history of the main culture areas in North America, including Mexico, from the time of the earliest populating of the New World to historic times. Lectures will include discussion of methods, techniques and interpretation in Archeology. Students will be required to participate in Laboratory work.  
(Not given in 1962-63.)



**302. Cultural Anthropology**

(3-0; 3-0)

A study of the evolution of prehistoric cultures in the old and new world; the organization of the life and thought of primitive peoples as evidenced in family, clan, and political relationships, economic practices, religion, art, mythology, folklore and social customs. (Not given in 1962-63).

**350. Indians of North America**

(3-1; 3-1)

A survey of the cultural and linguistic areas of aboriginal North America, and including a comparative and historical study of technology, social organization, economic systems, religions, art and language. Some emphasis will be given to the Indians of Canada. (Not given in 1962-63).

**360. Peoples and Cultures of Latin America**

(3-0; 3-0)

Study of the basic sources of modern Latin American society and culture; the aboriginal Indian traditions and those brought from the Iberian Peninsula. Emphasis will be placed on the institutional and value systems of modern Latin America.

**395. Prehistoric Archeology**

(3-1; 3-1)

Archeology as the anthropological approach to reconstruction and study of extinct, non-literate societies; archeological techniques, methods and modes of interpretation; comparative analysis of the major prehistoric developments of the world.

**410. Theory of Culture and Culture Change**

(3-0; 3-0)

Study of past and current thought concerning the nature of culture and culture change, with attention to such concepts as cultural evolution, diffusion, invention, acculturation, patterns and themes. Relation of theory to problems of planned culture change in underdeveloped areas of the contemporary world.

Prerequisite: Anthropology 202, Sociology 202 or consent of instructor.

**STATISTICS****205. Behavioural Statistics**

(3-3; 3-3)

(Instruction offered by members of the Departments of Mathematics and Psychology.)

Tabulation, graphical representation and reduction of data. Measures of location and dispersion. Probability and relative frequency. The binomial and normal distributions. Curve fitting and the chi-square test of goodness-of-fit. Relation between sample and population. Confidence intervals and confidence interval charts. The *t* and *F* distributions. Testing of statistical hypotheses. Linear regression and prediction. Simple correlation. Test of independence in contingency tables. Non-parametric tests.

Applications of the above statistical concepts to the evaluation and interpretation of empirical data in psychology and sociology.

**255. Elementary Statistics**

(3-3; 3-3)

Graphs, tables, diagrams. Frequency distributions, averages, dispersion, moments. Elementary probability. Binomial, normal and Poisson distributions. Sampling. Regression and correlation. Significance tests. Applications to data in various fields.

Textbook: Kenney and Keeping, **Mathematics of Statistics**, Part I (Van Nostrand).

Prerequisite: Mathematics 30 of high school.

**354. Statistics**

(3-3; 3-3)

Graphs, tables, diagrams. Frequency distributions, averages, dispersion, skewness. Moments, normal law, regression, simple correlation, multiple correlation, applications to data in various fields. Sampling methods, time series, seasonal and cyclical variations, index numbers, tests of significance.

Textbook: Kenney and Keeping, **Mathematics of Statistics**, Part I.

Prerequisite: Mathematics 30 of high school.

(This course is for students in the Faculty of Commerce).

**ZOOLOGY**

**Associate Professor**—R. C. B. Hartland-Rowe.

**Assistant Professors**—P. K. Anderson, N. Henderson.

**Sessional Instructor**—Glenn Burgess.

**Junior Course—****220. Elementary Zoology—Staff**

(3-3; 3-3)

Animal organization; comparative morphology; essentials of histology; principal phenomena of distribution, behavior, ecology, development and reproduction, evolution, variation and heredity.

**Senior Courses—****300. The Chordates—P. K. Anderson**

(3-3; 3-3)

A comparative review of the chordates, with dissections of available types from all classes.

Prerequisite: Zoology 220.

**315. Elementary Genetics**

(3-0; 0-0) or (0-0; 3-3)

A course designed primarily for biologists, dealing with mendelian inheritance, linkage, sex determination, mutation, the structure and function of the gene, population genetics, developmental genetics, cytoplasmic inheritance, and relating topics.

Prerequisite: Zoology 220.

**350. The Invertebrates—R. C. B. Hartland-Rowe**

(3-3; 3-3)

A survey of the invertebrates with emphasis on functional anatomy and the evolution of organ systems.

Prerequisite: Zoology 220.

**362. Elementary Animal Ecology—P. K. Anderson**

(3-3; 0-0) or (0-0; 3-3)

An introduction to the principles governing the relationships between animals and their environments.

Prerequisites: Zoology 300, 350. Zoology 300 may be taken as a corequisite with the instructor's permission.

**421. Principles of Evolution**

(3-0; 0-0) or (0-0; 3-0)

Darwinian and post-Darwinian concepts of evolution; mechanisms of evolutionary drift; isolation; variation and other selected topics.

Prerequisites: Zoology 300, 350. Zoology 300 may be taken as a corequisite with the instructor's permission.

**Honor and Graduate Courses—****520. Seminar in Zoology**

(1-0; 1-0)

Required of all fourth-year Honors and Graduate Students.

**529. Special Problems in Zoology (3 hours either or both terms)**

# *Curriculum Outline*

## *B—Faculty of Agriculture*

### **INTRODUCTION**

The Faculty of Agriculture was established at the University of Alberta in 1915 and the first students to receive the degree of Bachelor of Science in Agriculture (B.S.A.) graduated in 1918. The present B.Sc. degree was first given in 1924.

The four-year course in Agriculture provides education in the science of agriculture. The Faculty has under its direct administration the departments of Agriculture; Economics and Farm Management, Agricultural Engineering, Animal Science, Dairy Science, Entomology, Genetics, Plant Science and Soil Science. Many of the courses which are fundamental to the science of agriculture are given in other departments of the University, since the underlying scientific principles are the same as in any other field. It is the function of the departments in this Faculty to apply these principles to the solution of agricultural problems and to seek, through research, new information.

Graduates of the Faculty are engaged in teaching, research, extension, and administrative work related to agricultural production, marketing, and processing; in the manufacture and distribution of such essentials as feeds, fertilizers, and machinery; in the handling of agricultural products; and in farming. During the past ten years an increasing number of agricultural industries have offered attractive opportunities for graduates of this Faculty.

The departments in the Faculty also offer advanced degrees, and carry on extensive programs of research. The departments of Animal Science, Plant Science, and Soil Science operate experimental farms used in the teaching and research programs of these departments. All departments have space and facilities for laboratory research.

A modified first year in Agriculture may be taken at the University of Alberta, Calgary, and at Lethbridge Junior College, by registering in the program listed later in this Calendar. The second, third, and fourth years in Agriculture are offered at the University of Alberta in Edmonton only.

A special first year program providing for the possibility of obtaining one year of advanced standing at Ontario Veterinary College may be taken with approval of the Dean, Faculty of Agriculture.

### **Student Guidance**

The Dean of the Faculty of Agriculture will be pleased to confer with students at any time.

Students of the second, third and fourth years will be assisted and guided in connection with their registrations by members of the Agricultural Registration Committee.

# FACULTY OF AGRICULTURE ADMISSION

## Matriculation Requirements

**Students from the high schools of Alberta seeking admission to the Faculty of Agriculture will be required to present either—**

I.—The High School diploma with "B" or higher standing in the following courses and an average in them of at least 60%:

1. English 30.
2. Social Studies 30.
3. Mathematics 30.
4. Chemistry 30.
5. and 6. Two of Physics 30.  
Biology 32.  
French 30 or German 30 or Latin 30.

Students should have Physics 30 where possible.

**or**

II.—A diploma from a Provincial School of Agriculture, together with "B" or higher standing in Literature 20; Language 20; Social Studies 20; one of French 20, German 20, or Latin 20; Mathematics 30; Chemistry 30; Physics 30 or Biology 32; with an average in three Grade XII courses of at least 60%.

Students who completed Grade XII in 1954 or earlier will be given full consideration for admission. They are advised to write to or to see the Registrar of the University and to provide a complete transcript of their high school records.

Candidates from outside Alberta will be required to meet equivalent standards.

**These general regulations notwithstanding, the University may in its discretion refuse admission to any applicant. For example, this regulation normally will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal requirements at the University of Alberta.**

## PROMOTION

1. Inasmuch as a rigid year system is not followed in the Faculty of Agriculture, promotion from year to year is made by Faculty Council upon the recommendation of (a) the First-Year Committee in the case of first-year students, and (b) the Agricultural Revisions Committee in the case of students of the succeeding years.
2. In general, promotion to the third year in Agriculture will be granted only to students who have passed all first and second year subjects required; exception may be granted when a student has passed all first and second year subjects but one and has an average standing for the two years of at least 60%.
3. Students transferring from other universities normally will be required to take, as a minimum, the equivalent of a regular senior year in attendance at the University of Alberta before the degree of B.Sc. in Agriculture will be granted.

The attention of students in Agriculture is directed to the fact that admission to postgraduate studies leading to the M.Sc. degree is based primarily upon the quality of the undergraduate work.

## PROGRAMS OF STUDY

### The Degree of B.Sc. in Agriculture

In the Faculty of Agriculture, courses are offered leading to the degree of B.Sc. in Agriculture.

A new program of required courses for undergraduate students in the Faculty of Agriculture was introduced in September 1961. Under the new program second year students have the opportunity to commence specialization in one of several branches of professional agriculture or they may embark on a general program of courses. Students who entered the Faculty of Agriculture before September 1960 will follow the previous program of requirements which will be available to them through the Office of the Dean.

Requirements for the B.Sc. degree in Agriculture for general and specialist programs follow.

## FIRST YEAR

SUBJECTS	First Term		Sec. Term	
	Lect.	Lab.	Lect.	Lab.
Agriculture 201 .....	6		6	
Botany 202 .....	3	4		
Chemistry 230 .....	4	3	4	3
English 220 .....	3		3	
Mathematics 200 .....	4	2	4	2
Zoology 225 .....			3	3
Physical Education .....		2		2

**First year at the University of Alberta, Calgary,  
and at Lethbridge Junior College**

SUBJECTS	First Term		Sec. Term	
	Lect.	Lab.	Lect.	Lab.
Botany 201 .....	3	3	3	3
Chemistry 230 .....	4	3	4	3
English 210 .....	3		3	
Mathematics 200 .....	4	2	4	2
Zoology 220 .....	3	3	3	3

- Notes: 1. Students desirous of majoring in Agricultural Economics will be permitted to substitute Economics 200 for either Botany or Zoology in the foregoing program.
2. Agriculture 201, Chemistry 350, Economics 200, Genetics 352 or Microbiology 360 or Genetics 360 **and** Bacteriology 201 are required second year courses for students taking the first year at Calgary or Lethbridge.
3. The second, third, and fourth years in Agriculture are offered at the University of Alberta, Edmonton, only.

## PROGRAMS OF STUDY

## SECOND YEAR

SUBJECTS	First Term		Sec. Term	
	Lect.	Lab.	Lect.	Lab.
Chemistry 350 .....	3	3	3	3
Economics 200 .....	3		3	
One of				
Genetics 352 .....	3		3	
or Microbiology 360 .....	3	3	3	3
or Bacteriology 201 <b>and</b> Genetics 360 .....	3	3	3	3
Electives—two full courses or equivalent				

## Second and Later Years

After successful completion of the requirements of the first and second years students must complete a minimum of ten full courses or equivalent in addition to Agriculture 451, which is required in the fourth year.

Commencing in the second year students may follow a general program designed to provide a broad training in agriculture or they may begin specialization in one of several fields.

Students whose records to date would qualify them for graduate studies (a course average of at least 70%) may register in a program in which they ultimately wish to undertake graduate study. This program must be approved by a staff member in the field of specialization and by the Dean.

Other students must meet the following requirements:—

1. Students not following a program of specialization must take courses in at least five Faculty of Agriculture departments and they must take at least ten half courses in Agriculture departments. Programs of study must be approved by the Registration Committee.  
Students following programs of specialization must meet a minimum of three Faculty of Agriculture departments in addition to the one in which they are specializing and they must take at least four half courses in those departments. Programs of study must be approved by the Registration Committee and the department of specialization.
2. At least two Arts and Science courses in addition to those listed for the first and second years are to be taken. One of these courses must be a social science or humanity. (Students specializing in Agricultural Economics would meet this latter requirement by a course other than an Economics course.)

Normally, fourth year students having advance senior credit must register for a program of five full courses or equivalent including "extras". Students may, under advice, register for additional courses up to a maximum of six full courses or equivalent in any one year. This total may not be exceeded except by special permission of the Dean of the Faculty.

**In order to exclude from the contract for graduation courses in excess of the minimum requirement, the student must designate such courses as "extras" at the time of registration for the final year. Changes in registration can be made only by arrangement with the Registration Committee before November 1 in the case of full-year or first-term courses, or before February 1 in the case of second-term courses.**

Attention is directed to the regulation that a student is responsible for the completeness and accuracy of his registration.

## THIRD AND FOURTH YEAR REQUIREMENTS FOR GRADUATION

1. After the requirements of the first two years have been met, students must obtain a passing mark or better in 10 full courses or equivalent and obtain an average of 60 percent in those courses.
2. A student will not be allowed to write more than the equivalent of three full course supplemental examinations whether for the purpose of obtaining passing marks or of raising his average to the required 60 percent.
3. A student will not be allowed to write more than the equivalent of two full course supplemental examinations in any year.
4. A student who is repeating a year will be granted no supplemental privileges in the courses taken that year and must pass all courses with a 60 percent average to be allowed to continue.
5. The privilege of repeating a year will be granted to a student not more than once during his candidacy for a degree in this Faculty, unless by special permission of the Faculty of Agriculture Council.



**SPECIAL PROGRAMS****Second Year**

The various programs of specialization list certain required courses and other preferred courses for second year students. These are tabulated below.

**Required of All Second Year Students:**

Chemistry 350.

Economics 200

**Preferred Electives for Specialization in Various Departments**

Agricultural Economics	Agricultural Engineering	Animal Science	Dairy Science
Genetics 352 or Micro 360 or Bact. 201 and Genetics 360	Genetics 352 Ag. Eng. 240	Bact. 201 and Genetics 360 or approved elective(s)	Micro. 360 Dairy Sci. 241

Entomology	Genetics	Plant Science	Soil Science
Genetics 352	Genetics 351	Genetics 352 or Micro. 360 or approved elective(s)	Micro. 360 Soil Sci. 240 and 250

Additional approved electives are required to give a total course load of at least five full courses or equivalent.

**Third and Fourth Years**

The general requirements for the various programs of specialization are given in the following sections. Students entering the third year must consult the departments in which they plan to specialize and it is highly desirable to work out a tentative program for both the third and fourth years. All programs of specialization must be approved by the Departments concerned and must be acceptable to the Registration Committee.

Students planning to follow the general program should consult the Registration Committee or the Dean to obtain approval of the programs which they plan to follow.

**PROGRAMS OF STUDY****DEPARTMENT OF AGRICULTURAL ECONOMICS AND FARM MANAGEMENT**

Third and Fourth Years: Agricultural Economics 362, 365, 366; Economics 300, 360; and three full courses from the following: Accounting 200; Agricultural Economics 430, 440, 450; Animal Husbandry 469; Animal Science 468; Business 300; Economics 310, 320, 340, 380; Field Crops 354, 355; Mathematics 304; Psychology 320; Soil Science 420, 470; Statistics 255.

**DEPARTMENT OF AGRICULTURAL ENGINEERING****Industrial Agriculture**

Third and Fourth Years: Physics 200; one of Business Administration 200, Business Administration 300, Farm Management 362; Agricultural Engineering 301, 302, 303, 304, 305 and 401. Electives to a minimum of one and one half full courses.

**DEPARTMENT OF ANIMAL SCIENCE**

The courses listed below, plus approved electives to a minimum of five full courses per year, are recommended for most students. Those who desire more specialized programs or who anticipate proceeding to graduate study are urged to consult the head of the department to consider alternative program outlines; Biochemistry 300 and Biometrics 455 are strongly recommended for these students.

**Animal or Poultry Husbandry**

Third Year: Animal Science 300, 310, Animal Husbandry 370, Poultry Husbandry 352, Veterinary Science 451. Farm Management 362, Crop Ecology 353, Field Crops 354.

**Animal Husbandry**

Fourth Year: Animal Science 468, Animal Husbandry 469, Animal Science 480, Animal Husbandry 482, Poultry Husbandry 455.

**Poultry Husbandry**

Fourth Year: Animal Science 468, Poultry Husbandry 453, 455, 459, 460.

**DEPARTMENT OF DAIRY SCIENCE**

The following programs may be modified in consultation with the head of the department:

**Dairy Science**

Second Year: Dairy Science 241; Microbiology 360; Agricultural Engineering 240 or elective; Physics 200 or elective.

Third Year: Dairy and Food Technology 352, 353; Dairy and Food Microbiology 465, 466; Biochemistry 300; Agricultural Economics 430 or elective; Agricultural Engineering 305 or elective; English or suitable elective.

Fourth Year: Dairy and Food Chemistry 474, 475, 476; Dairy Science 490 or elective; Dairy and Food Technology 451, 452 or elective; Agricultural Economics 440 or elective; Biometrics 455 or Business 200 or elective; Animal Husbandry 370 or 469 or Genetics 360 or elective; Agriculture 451.

**Agricultural and Food Microbiology**

Second Year: Dairy Science 241; Microbiology 360; Soil Science 430; Physics 200 or elective.

Third Year: Dairy and Food Microbiology 465, 466; Dairy and Food Technology 352, 353; Biochemistry 300; Agricultural Economics 365 or elective; Agricultural Engineering 240 or elective; English or suitable elective.

Fourth Year: Dairy and Food Microbiology 467; Dairy and Food Chemistry 475, 476; Dairy and Food Technology 451, 452 or elective; Microbiology 402; Biometrics 455 or elective; Plant Pathology 480 or Horticulture 455 or Genetics 360 or elective; Agriculture 451.

**Food Science**

Second Year: Microbiology 360; Physics 200; Mathematics 304 or elective.

Third Year: Biochemistry 300; Agricultural Engineering 305; Dairy and Food Technology 352, 353; Dairy and Food Microbiology 465; Metallurgical Engineering

252 and Chemical Engineering 252 or elective; Chemistry 370 or 312 or suitable electives to make up to five courses.

Fourth Year: Dairy and Food Chemistry 474, 475; Household Economics 461 or Animal Science 468; Dairy and Food Microbiology 467; Horticulture 352, English or suitable elective; Agricultural Economics 440; and electives to two half courses of which the following are suggestions: Dairy and Food Technology 451, 452; Business 200; Soil Science 460; Genetics 360.

### **DEPARTMENT OF ENTOMOLOGY**

Third and Fourth Years: Students wishing to specialize in entomology should consult with the head of the department respecting their course programs. The department is active in behavior, ecology, morphology, physiology, taxonomy and toxicology of insects.

### **DEPARTMENT OF GENETICS**

Third and Fourth Years: Students wishing to specialize in Genetics should consult with the head of the department respecting their course programs. The department is active in cytology, cytogenetics, microbial genetics, biochemical genetics, biometrical genetics, radiation genetics, plant breeding, and genetics of parasitism.

### **DEPARTMENT OF PLANT SCIENCE**

The Department of Plant Science is composed of the following divisions:

- Crop Ecology
- Horticulture
- Plant Pathology
- Plant Physiology and Biochemistry

Students interested in a program in general plant science or in specialization in a particular field of study should consult with the head of the department or with staff members in charge of the various divisions.

### **DEPARTMENT OF SOIL SCIENCE**

Soil chemistry, soil fertility, soil genesis and classification, soil microbiology, soil physics.

Third and Fourth Years: Soil Science 420, 430, 450, 460, 470 and either Biometrics 455 or Geology 201 plus electives to meet requirement for degree in specialized programs.

Consult the Department for a detailed listing of the courses in the other Agricultural Departments and in other Faculties acceptable as electives for specialization in Soil Science.

### **SPECIAL PROGRAM FOR ADVANCED STANDING IN VETERINARY MEDICINE AT ONTARIO VETERINARY COLLEGE**

Facilities at the Ontario Veterinary College limit the number of students that the College can accept. For that reason the Ontario Veterinary College cannot give firm assurance to students that they will be admitted to the College.

Students desirous of studying veterinary medicine at Ontario Veterinary College may qualify for advanced standing in the first year of the required program at O.V.C. by successful completion of the following program with an average of at least 65%. **However, students attaining that standing are not assured of admission to the second year of the O.V.C. program; their applications will be accepted in competition with**

those of similar students from other provinces and the limited facilities at O.V.C. will be available to those students with the highest standing.

SUBJECTS	First Term		Sec. Term	
	Lect.	Lab.	Lect.	Lab.
Botony 201 .....	2	4	2	4
Chemistry 25 .....	3	3	3	3
English 210 .....	3	---	3	---
Physics 200 .....	3	2	3	2
Zoology 220 .....	3	3	3	3
Physical Education .....		2		2

Because the foregoing program is not a regular one for the Faculty of Agriculture, students desirous of obtaining first year credit at Ontario Veterinary College by the above route will be registered as Special Students in the Faculty of Agriculture, University of Alberta. **Approval of the Dean is required.**

Students successfully completing the above Special Program for first year veterinary medicine with an average of at least 60% will be able to transfer to the B.Sc., in Agriculture program at the University of Alberta with the opportunity to earn the degree by the successful completion of three additional years of work.

### MATRICULATION REQUIREMENTS FOR THE SPECIAL PROGRAM FOR ADVANCED STANDING IN VETERINARY MEDICINE

The high school diploma with "B" or higher standing in the following courses and an average in them of at least 60%.

- |  |                       |
|--|-----------------------|
| 1. Chemistry 30                              | 4. Mathematics 30.    |
| 2. English 30.                               | 5. Physics 30.        |
| 3. French 30 or<br>German 30 or<br>Latin 30. | 6. Social Studies 30. |

# *Curriculum Outline*

## *C—The Faculty of Commerce*

### (1) INTRODUCTION

#### **Purposes of the Commerce Curriculum**

The curriculum of the Faculty of Commerce is based on two beliefs:

1. Education for business management is a life long process.
2. Universities can make their greatest contribution to this process by teaching the disciplines and fields of knowledge which underlie the practice of business. Details of current business practice, though important, can best be taught by business itself and learned through experience.

Business and its environment have changed enormously in the last twenty years and will change at an even faster pace in the next twenty. No school of business can possibly teach the solution of problems which will arise twenty years from now. A school should provide the best possible basis for effective life-long learning through actual experience. The School should not ask, "What should the businessman know?" but rather "Of all things he should know, what are best taught in the few years of academic, professional education?" Universities should teach the broad underlying fields of knowledge which are basic to business, and should treat the fields of business practice in comprehensive analytical framework, rather than teach recent or current business practice. Alfred North Whitehead, British philosopher and noted educator, stated this theory in simple words when he said that a properly educated man ". . . will remember by an unconscious common sense how to apply principles to immediate circumstances." In the first two years of the program, the student will take courses in the basic disciplines. Later he will be taught how this basic knowledge may be applied most effectively to the solution of the various problems of business in a general program or in a specialization of his choice which may be selected from the fields of economics, accounting, marketing, production, finance or personal administration.

The Faculty of Commerce is proud to number among its graduates many individuals now holding positions of trust and leadership in the Canadian business world. A review of the present activities of graduates since the Faculty was organized in 1928 indeed indicates a wide diversity of occupations.

#### **Practical Experience Qualifications.**

Students must satisfy the Faculty that they have had some practical business experience before they will be allowed to graduate. This experience may have been obtained before entering university. If it has not, then arrangements should be made to get it during the summer months. The equivalent of two full summers of practical experience (nine months) will be required.

In February of each year an opportunity will be given to students to present themselves before a Committee under the direction of the Dean to outline the work which they have done or intend to do to meet the practical experience qualifications. This should be done before the end of the Second Year.

### Advisory Committee to the Faculty of Commerce

To keep staff and students informed about latest trends in business and industry, a group of active leaders in the administration and direction of business enterprises have been invited periodically to meet with the Academic staff of the Faculty.

These members are appointed by the Board of Governors upon nomination by the President of the University.

**Mr. Ian Angus**, General Manager, Canadian Sugar Factories Ltd.

**Mr. A. G. Bailey**, Vice-President and General Manager, Bailey-Selburn Oil and Gas Ltd.

**Mr. A. T. Baker**, General Manager, Alberta Wheat Pool.

**Mr. S. Belzberg**, President, Belzberg Enterprises Ltd.

**Mr. J. A. Cranstoun**, Manager, Bank of Nova Scotia.

**Mr. D. S. Harvie**, General Manager, Western Leaseholds Ltd.

**Mr. G. R. Heffernan**, Managing Director, Premier Steel Mills Limited.

**Hon. E. W. Hinman**, Provincial Treasurer.

**Mr. Howard Kelly**, Vice-President and Secretary, Burns and Company Ltd.

**Mr. J. C. Langford**, Plant Manager and Vice-President, Canadian Chemical Company Ltd.

**Mr. M. Marvin**, General Manager, The Life Insurance Company of Alberta.

**Mr. James A. Scott**, President, Pembina Pipe Lines Ltd.

**Mr. T. Sissons**, Production Manager, Medicine Hat Brick and Tile Company Ltd.

**Mr. M. E. Stewart**, General Manager, Northwestern Utilities Ltd.

**Mr. N. E. Tanner**, President, Trans-Canada Pipelines.

**Mr. I. Telmer**, Manager, Hudson's Bay Company.

**Mr. L. W. White**, Division Manager, Imperial Oil Ltd.

**Mr. M. Wolfe**, General Manager, Edmonton Motors Ltd.

**Mr. W. S. Ziegler**, Executive Vice-President, Inland Cement Company.

### Calgary

The University offers in Calgary the first two years of the course leading to the degree of Bachelor of Commerce.

### (2) ADMISSION REQUIREMENTS

Students from Alberta high schools seeking admission to the School of Commerce will be required to present:

- (a) a High School Graduation Diploma with
- (b) "B" or higher standing in the following Grade XII examination subjects:
  1. English 30,
  2. Social Studies 30,
  3. Mathematics 30,
  4. 5 and 6. **Three of:**
    - Chemistry 30,
    - Physics 30,
    - Biology 32,
    - French 30 or German 30 or Latin 30; and
- (c) an average in these six courses of at least 60%.

Candidates from outside Alberta will be required to meet equivalent standards and should submit their documents to the Registrar of the University for evaluation. A fee of five dollars is charged for this service.

Note: **Students** who completed Grade XII in 1954 or earlier will be given full consideration for admission. They are advised to write to or see the Registrar of the University and to provide a complete transcript of their high school records.

### (3) PROMOTION AND GRADUATION

#### Faculty of Commerce

1. Promotion of the student from the first to the second year is contingent on the satisfactory completion in one year of a first year program of



- normal weight. The regulation applies also to students transferring from universities.
2. For students in the three year program, six courses must be passed with at least second-class standing, of which four must be courses taken in the second and third years.  
For students in the four year program eight courses must be passed with at least second-class standing, of which at least four must be courses taken in the third and fourth years.
  3. In the three year program, any student failing to obtain a second-class standing in Accounting 300 will be permitted to write a special examination in this course in the spring of the year following that in which the course was taken.

#### (4) **ACADEMIC HONORS**

##### **First Class Standing**

First-class standing in a given year is awarded to any student who secures an average mark of not less than 80% in the work of that year.

#### (5) **PROGRAMS OF STUDY**

##### **New Four Year Program**

The new curriculum in the Faculty of Commerce is based upon a four year program. During the third and fourth years of the program the student may pursue a general course or may major in Economics, Accounting, Personnel, Finance, Production or Marketing. The third and fourth years are subject to change.

The student's attention is directed to the fact that certain of these majors require credit in a particular course in the second year.

Students who select a major area of study may expect to have that fact noted on their graduation diploma.

Courses in the first two years of the program are offered from time to time in the Summer Session and Evening Credit Program. The final two years of the program may be taken in the regular Winter Session.

##### **All Programs**

##### **First Year**

Accounting 200  
Business 200  
Economics 200  
English 210  
Junior Arts and Science Option  
Physical Education

##### **Second Year**

Business Law 310  
Psychology 220  
Statistics 354  
An approved course in Accounting, Mathematics, Economics or Sociology  
\*Arts and Science Option

##### **General Course**

##### **Third Year**

Finance 300  
Marketing 300  
Personnel 300  
Production 300  
\*Arts and Science Option

##### **Fourth Year**

Accounting 340  
Business 400  
One approved course in Mathematics, Economics, Psychology, Marketing, Production, Finance or Personnel  
\*Two Arts and Science options

**Major in Accounting**

(Open only to Students with credit in Accounting 300)

**Third Year**

Accounting 410  
Accounting 420  
Business 300  
One of Economics 300, 340, or 380  
\*An Arts and Science option

**Fourth Year**

Accounting 430  
Accounting 440  
Business 400  
\*Any general course in the Faculty of Arts and Science.  
One of Economics 300, 340, 380, Marketing 300, Production 300 or Personnel 300  
\*Arts and Science Option

**Major in Economics**

(Open only to students with credit in Economics 300)

**Third Year**

Economics 340  
Economics 380  
Mathematics 200 or 201  
One of Finance 300, Production 300, Marketing 300 or Personnel 300  
\*Arts and Science Option

**Fourth Year**

A Senior Economics Course  
Business 400  
One of Business 450 or 460  
Accounting 340  
\*Arts and Science Option

**Major in Finance**

(Open only to students with credit in Economics 340)

**Third Year**

Finance 300  
One of Production 300, Marketing 300 or Personnel 300  
Accounting 300  
Mathematics 250  
\*Arts and Science Option

**Fourth Year**

Two of: Finance 400  
Finance 410  
Finance 420  
Finance 430  
Business 400  
Economics 350 or 380  
\*Arts and Science Option

**Major in Marketing****Third Year**

Marketing 300  
One of Production 300, Finance 300 or Personnel 300  
Psychology 320  
A course in Statistics  
\*Arts and Science Option  
\*Any general course in the Faculty of Arts and Science.

**Fourth Year**

Three of: Marketing 400  
 Marketing 410  
 Marketing 420  
 Marketing 430  
 Marketing 440

Business 400

\*Arts and Science Option

**Major in Personnel**

(Open only to students with credit in Sociology 202)

**Third Year**

Personnel 300

Personnel 310

One of Finance 300, Marketing 300 or Production 300

Psychology 320

\*Arts and Science Option

**Fourth Year**

One of: Personnel 400

Personnel 410

Personnel 420

Business 400

One approved course in Psychology

Sociology 460

\*Arts and Science Option

**Major in Production**

(Open only to Students with credit in Accounting 300)

**Third Year**

Production 300

One of Personnel 300, Finance 300 or Marketing 300

Economics 300

Mathematics 200 or 201

\*Arts and Science Option

**Fourth Year**

Two of: Production 400

Production 410

Production 420

Production 430

Business 400

Accounting 420 or 440

\*Arts and Science Option

\*Any general course in the Faculty of Arts and Science.

**Bachelor of Commerce with Honors**

The Faculty is presently considering an Honors program.

Previous programs in Honors Business Administration and Honors Political Economy will no longer be offered.

The Combined Course B.A. and B.Com. and the former Three Year Program, Bachelor of Commerce will not again be offered. Students who have already registered in either of these courses are advised to plan the remainder of their programs in consultation with the Dean of the Faculty.

**(6) DETAILS OF COURSES****ACCOUNTING****200. Elementary Accounting—**

(3-2; 3-2)

This course is designed to present the language of accounting to the student. The course is devoted to the mechanics of account and their

application to specific conditions which arise in the business world. Attention is directed to the characteristics of the various forms of business organizations and the accounting implications from the standpoint of legal as well as managerial requirement.

**300. Intermediate Accounting (3-2; 3-2)**

This course is a continuation of Accounting 200 and covers an examination of basic accounting theory involving accounting standards and their application to specific business conditions. An intensive study is made of the partnership and limited company form of business organization and those particular aspects which are peculiar to these types of organizations both from a legal and management standpoint.

### BUSINESS

**200. Introduction to Business (3-0; 3-0)**

Survey of the place of business in modern society.

### BUSINESS LAW

**310. Commercial Law (3-0; 3-0)**

An introduction to the study of Commercial Law with special reference to the law of contracts; Bills of Sale; Chattel Mortgages and conditional sales; sales of goods, bulk sales; contracts of hiring; contracts of carriage including bills of lading; negotiable instruments; guarantees; real property, commercial associations including companies, partnership and agency; master and servant.

### PSYCHOLOGY

**220. Psychology Applied to Business and Industry (3-0; 3-0)**

(Members of the Department of Psychology)

A survey of problems, methods and principles in several fields of psychology with particular reference to the fields of business and industry.

### STATISTICS

**354\* Statistics (3-3; 3-3)**

Graphs, tables, diagrams, Frequency distribution, averages, dispersion, skewness. Moments, normal law, regression, simple correlation, applications to data in various fields. Sampling methods, time series, seasonal and cyclical variations, index numbers, tests of significance.

Textbook: Kenney and Keeping, **Mathematics of Statistics**, Part I (van Nostrand).

Prerequisite: Mathematics 30 of High School.

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(\*In Calgary, Commerce Students take Statistics 255).

# Curriculum Outline

## D—Faculty of Education

### I.—INTRODUCTION

The Faculty of Education is organized for the professional training of teachers for elementary, junior high, and senior high school grades, and for graduate study and research in the field of Education.

In this part of the calendar appear the courses of study administered by the Faculty of Education together with regulations governing these programs. General regulations applicable to all faculties of the University are to be found in Part II of the Calendar.

This part also contains requirements for certificates issued by the Provincial Department of Education on the recommendation of the Faculty of Education. Such certificates are granted under the authority of the Minister of Education.

Address inquiries to: The Dean, Faculty of Education, University of Alberta, Calgary.

#### (1) Board of Teacher Education and Certification

A Board of Teacher Education and Certification, representing jointly the Department of Education, the University of Alberta, the Alberta Teachers' Association, and the Alberta School Trustees' Association, serves as a liaison body for the groups it represents. This board is purely an advisory body. It is authorized to make recommendations to the Minister of Education and to the President of the University respecting the programs of instruction, the estimates of expenditures on these programs, appointments to the staff of the Faculty of Education, and regulations governing the certification of teachers.

#### (2) Programs (General Statement)

Entrance or matriculation requirements are specified below.

The training programs are detailed in Section VI. There are two general programs, one for elementary school teaching and one for secondary school teaching. The latter provides for considerable specialization either in the usual academic subjects, such as English, French, and mathematics, or in special subjects, such as household economics, industrial arts, physical education, fine arts, and commercial subjects.

In addition there is a highly specialized program in industrial arts.

All programs provide for certification by the Alberta Department of Education on the completion of two years of training, higher certificates at the end of the third year, and the Bachelor of Education degree at the end of the fourth year.

To suitable candidates the faculty offers graduate courses leading to the M.Ed., Ed.D., and Ph.D. degrees.

#### (3) Programs at Edmonton and Calgary

All programs offered by the Faculty of Education, except for the B.Ed. in Industrial Arts, are available in Edmonton.

The following programs are available in Calgary:

- (a) All years of the B.Ed. program for elementary school teachers.
- (b) All years of the B.Ed. program for secondary school teachers.
- (c) All years of the B.Ed. in Industrial Arts program.

Students in Calgary wishing to specialize in drama, home economics, and business education may find it necessary to rearrange their study programs slightly to provide for later entry into these special fields.

## II ADMISSION

(a) **Admission Requirements for 1962-63.**

Matriculants from the high schools of Alberta seeking admission to the Faculty of Education in September, 1962, must possess:

- I. a High School Graduation Diploma with
- II. "B" (50%) or higher standing in each of the courses of Grade XII as set forth below, and
- III. an average in these courses of at least 60%:
  1. English 30,
  2. Social Studies 30,
  - 3, 4, 5, 6. Four of: French 30, German 30, Latin 30, Chemistry 30, Physics 30, Biology 30 or 32, Mathematics 30, Mathematics 31 (providing this is written as a 1962 departmental), Music 30.

## Notes:

1. Candidates intending to specialize in household economics should offer Chemistry 30.
2. Adult applicants (age 20 or over) will not be required to present a high school diploma, but (II) and (III) above still apply.
3. Candidates intending to major in mathematics should present Mathematics 31 in addition to Mathematics 30.

**These general regulations notwithstanding, the University may, at its discretion, refuse admission to any applicant. For example, this regulation normally will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal entrance requirements at the University of Alberta.**

(b) **Admission with Advanced Standing or Advanced Credits**

Applicants presenting transcripts from normal schools, teachers' colleges, or universities other than the University of Alberta, will have such transcripts evaluated by the **Committee on Admissions**. The transcripts should be submitted to the Dean of the Faculty of Education, University of Alberta, Calgary. A **Visé** fee of **FIVE** dollars is charged for evaluating documents issued in Canada and **TEN** dollars for evaluating documents issued in other countries.

(c) **Extramural Credits**

Credit to a maximum of four **junior** courses taken extramurally from another recognized university will be allowed, although the actual number will vary with the program.

(d) **Application for Admission**

Application forms may be obtained from the office of the Registrar of the University, Edmonton or Calgary. Each student applying for the first time for admission to the Faculty of Education should write the Examinations Branch, Department of Education, Edmonton, requesting that two transcripts of his high school record be forwarded to the Registrar of the University at Calgary. When writing for transcripts he should give his name in full, the year in which his last departmental examinations were written and the grade level of these examinations. He should enclose the fee of \$2.00 charged for this service.

Students from outside the province will write to the Registrar of the Provincial Department of Education in the province where senior matriculation was obtained.

Credits obtained in the June examinations of 1962 should be submitted as soon as results are available.



**No definite and final ruling concerning registration can be obtained until all certificates and transcripts of standing have been reviewed by the Committee on Admissions.** The Faculty of Education gladly consults with and advises students regarding programs of study, but all decisions are **unofficial** and **tentative** until documents have been received and evaluated by the Committee on Admissions.

### III—REGISTRATION

#### (1) Registration and Pre-Registration Procedures

Applicants for admission must—

- (a) furnish evidence by means of two transcripts of credit record from a Department of Education or other educational authority that they meet matriculation requirements;
- (b) complete, in triplicate, **Application for Admission** forms obtainable from the Registrar, and return to the Registrar before August 14, 1962;
- (c) indicate whether they expect to attend in Edmonton or Calgary.

#### (2) Registration Details

##### (a) Change of Registration:

The accuracy of his registration forms is the responsibility of each student. Changes in registration may be allowed on application to the Faculty of Education office within one month of date of registration. Thereafter written application for change must be made to the Dean of the Faculty and will be allowed only for the most impressive reasons.

##### (b) Transfer from One Program to Another:

In general, a student may transfer from one training program to another at any point in the four-year program, provided he obtains credit in subjects of the new program which were not included in the former one.

##### (c) Registration in Physical Education:

General University regulations require all first-year students to obtain credit in physical education. Students in the Faculty of Education will register in Physical Education. Though students excused by a medical officer need not participate in physical exercise, they are held responsible for all theoretical and instructional phases of the courses, and must attend classes.

##### (d) Who May Register?

No person other than a British Subject or a Canadian citizen is eligible to receive a permanent Alberta teacher's certificate. Recent amendments to The School Act authorize temporary Alberta certificates for certain candidates who, otherwise qualified as teachers, file acceptable evidence that they intend to qualify for Canadian citizenship.

"Statement re Age and Citizenship" forms must be completed by each applicant for an Alberta teacher's certificate.

##### (e) Limitation on Registration:

Except by special permission of the Council of the Faculty, no student under its jurisdiction may offer for credit in any period of twelve months from July 1st to June 30 more than the number of courses included in a year of the regular program. Except by special permission of the Council of the Faculty, no student may take in the Summer Session more than two courses.

## IV—GENERAL INFORMATION

**(1) Education Undergraduate Society**

The Education Undergraduate Society (E.U.S.) is a professional organization and a branch of the Alberta Teachers' Association (A.T.A.). It is expected that all Education students will:

- (a) join the Society,
- (b) participate in its social activities, and
- (c) actively promote its professional interests.

**(2) Transfer from One Program to Another**

In general, a student may transfer from one training program to another at any point in the four-year program, provided he obtains credit in subjects of the program which were not included in the former one.

**(3) Examinations****Finals**

Final examinations are held at the end of each winter, summer or special session. The pass mark in all subjects of both degree and certification programs is 50%.

**Supplementals**

- (a) In the case of a student proceeding to the B.Ed. degree by summer session study alone, special permission may be granted for the writing of supplemental examinations to obtain required "seconds" even though an applicant has not completed all courses prescribed in his degree program.
- (b) There is no supplemental privilege in student teaching.
- (c) Teachers who, during the regular Supplemental Examination period, are in teaching positions may, with approval, write the supplemental examination at the end of the Summer Session. If an examination in the required subject is on the regular schedule, the fee for the supplemental is \$10.00. If a special examination paper must be prepared, the fee is \$15.00.
- (d) Students who **fail** courses in the summer Session will not be granted supplementals.

**(4) Extramural Study**

For conditions under which undergraduates may receive credit for extramural study, see Section II (c).

The privilege of completing certain courses extramurally is sometimes extended to M.Ed. candidates and also to B.Ed. candidates who hold a B.A., B.Sc., or B.Com. degree. No courses in Education are offered extramurally.

Some departments in the Faculty of Arts and Science may consent to extramural registration in certain courses.

**(5) Regulations Governing Certification**

For detailed regulations governing certification of teachers, students should write the Registrar, Department of Education, Administration Building, Edmonton. A pamphlet is available on request.

**(6) Advance Credits for Certificated Teachers**

One year's credit in the four-year program is given for one year of basic teacher education.

A maximum of three course credits will be allowed in the four-year general B.Ed. program for courses completed in Alberta Department of Education summer

school sessions, 1935-43 inclusive, one course credit being allowed for every 75 hours of certified attendance. For teachers discharged from the armed forces a date earlier than 1935 will be taken to make full allowance for the applicant's period of service.

Few advance credits can be given certificated teachers in the B.Ed. in Industrial Arts program. One or two credits may be allowed for normal school or other basic training. Little credit can be given for courses completed in the 1935-43 summer sessions unless the courses are in the specialized field of the B.Ed. program for which they are being evaluated.

#### (7) **Special Second-Year Program for Certificated Teachers**

Certificated teachers will for their second year be entered upon a special program consisting almost exclusively of Arts and Science courses. For details, see Section VI.

#### (8) **Evening Credit Program**

Students contemplating registration in Evening Credit courses must contact Dr. T. G. Finn, Director, well in advance of September 10, the last day for registration in the Evening Credit Program.

### **V—CERTIFICATION\***

Alberta teaching certificates are issued only by the Department of Education, Government of Alberta. All inquiries concerning certification should be addressed to the Registrar, Department of Education, Edmonton.

The certificates mentioned in the following pages are authorized under Order-in-Council 728 (1954) of the Government of Alberta.

\* Junior and Senior Diplomas are no longer issued.

### **PART A (General Certificates)**

#### **Types of Certificates**

1. Except as otherwise provided herein, the certificates issued hereafter by the Minister of Education shall be of the following classes:

Standard E Certificate,  
Standard S Certificate,  
Professional Certificate.

#### **Grade Ranges of Certificates**

2. The range of school grades throughout which each of the teachers' certificates mentioned above is valid license to teach is shown in the following schedule:

<b>Certificates</b>	<b>Grades</b>
Standard E .....	I-IX
Standard S .....	IV-XI
Professional .....	I-XII

#### **The Standard E Certificate**

3. (a) A person who has completed satisfactorily the first two years of the B.Ed. program of the University of Alberta prescribed for teachers of elementary and junior high school grades may be granted an Interim Standard E Certificate, valid for three years.
- (b) Before the Interim Standard E Certificate may be made permanent, the holder:
  - (i) must teach successfully in Alberta schools for two years, and
  - (ii) must be recommended by a Superintendent or Inspector of Schools.

### The Standard S Certificate

4. (a) A person who has completed satisfactorily the first two years of the B.Ed. program of the University of Alberta prescribed for teachers of the high school grades may be granted an Interim Standard S. Certificate, valid for three years.
- (b) The interim Standard S Certificate may be made permanent as in 3 (b) above.
- (c) Graduates from the Junior E program, or from a regular Normal School one-year program, will enter a six-course program for the second year of the elementary route, or a seven-course program for the second year of the secondary route. (See Section VI, c).

### The Professional Certificate

5. (a) A person who has completed satisfactorily three years of the B.Ed. program of the University of Alberta prescribed for teachers of the elementary and junior high school grades or of the high school grades may be granted an Interim Professional Certificate.
- (b) The Interim Professional Certificate may be made permanent as in 3 (b) above.

### The Certification of University Graduates

6. (a) The holder of a bachelor's degree, an Honors bachelor's degree or a Master's degree acceptable to the Minister may be granted an Interim Professional Certificate upon completion of one year's approved work in the Faculty of Education.

### Teachers with Permanent Certificates

7. The requirements for a permanent certificate may be waived in the case of a teacher qualifying for any certificate, provided he previously held an Alberta permanent certificate of another class.

## PART B (Existing Certificate)

### Exchange of Certificates

8. The holder of a certificate or license issued under former regulations may, upon application to the Minister, exchange it for a new certificate as indicated in the following table:

### Table of Certificate Ratings:

Certificates named in O.C. No. 70-50 or in former Regulations	Equivalent Certificates
Temporary License .....	Interim Junior E
Junior Elementary and Intermediate School Certificate .....	Interim Junior E
Second-Class Certificate (see section 9 below) .....	Interim Junior E
Elementary and Intermediate School Certificate .....	Junior E
Senior Elementary and Intermediate School Certificate .....	Junior E (with teaching privileges extended to include Gr. X)
Junior Certificate for the High School .....	Standard E
First-Class Certificate .....	Standard S Standard E and Standard S (with teaching privileges extended to include Gr. XII)
High School Certificate .....	Professional
Academic Certificate .....	Professional
First-Class Certificate with Bachelor's degree .....	Professional

## Second-Class Certificate

9. The holder of a Second-Class Certificate, either interim or permanent, shall be entitled to teach grades one to nine inclusive.

## General

10. The Minister may, with respect to existing certificates, take such further action as he may deem necessary, provided such action is not inconsistent with these regulations.

## PART C

For details regarding special certificates, requests should be directed to the Registrar, Department of Education, Administration Building, Edmonton. Special certificates may still be issued to teachers who have taken courses leading to special certificates prior to 1960 and have since completed the requirements.

## VI—DETAILS OF PROGRAMS

In this section the course requirements of the following programs are described:

- A. Standard Elementary B.Ed. Route.
- B. Standard Secondary B.Ed. Route.
- C. Special Second-Year-Certificated Teachers.
- D. B.Ed. in Industrial Arts.
- E. B.Ed. for holders of approved degrees.
- F. Advanced study in Education.

### A. Standard Elementary B.Ed. Route

This program is open only to students who have clear matriculation into the Faculty of Education.

Upon completion of the first two years, candidates are eligible for the Interim Standard E Certificate, valid in Grades I to IX; completion of three years earns the Interim Profession Certificate, valid in Grades I to XII; completion of four years, the B.Ed. degree.

### First Year

1. Ed.Fdn. 201: Introduction to Education.
2. Ed. ADM. 261: Educational Administration.
3. English 200 or 230 or 240.
4. Ed. PSY. 276: Introduction to Educational Psychology.
5. Major.
6. Minor or Arts and Science Option.
7. Physical Education.

### Second Year

For students who have completed 1st year on or before September 1962. (Those admitted with one year advance credit for teacher education see Section VI C).

1. Ed. ADM 261: Educational Administration.
2. Ed. CI 300: Student Teaching.
3. Ed CI 284: Social Studies.
4. Ed. CI 286: Mathematics-Science.
5. Ed. CI 288: Reading and Language.
6. Ed. CI 252 or 254.
7. English 398, or Art or Music option. (Art 230, Music 200, Ed. CI 252, Ed. CI 254).

**Third Year**

1. Ed. PSY 476: Educational Psychology.
2. Philosophy 240, 260, 352, or 354. (Philosophy 246 or 356 may be offered by Roman Catholic students.)
3. Senior Education option.
4. English 398, or Art or Music option. (Art 230, Music 200, Ed. CI 252, Ed. CI 254).
5. Junior or Senior Arts and Science option.

**Fourth Year**

1. Ed. FDN 492: Philosophy of Education.
2. Senior Arts and Science or Senior Education option.\*\*
3. Senior Arts and Science option.
4. Senior Arts and Science option.
5. Senior Arts and Science option.

**General Notes**

1. **Graduation Requirements:**
  - (a) Two course credits in English, one to be English 398; two course credits in science or one science and one mathematics: two course credits in the social sciences, one to be in Canadian History; and one course credit in each of art and music.
  - (b) Of the courses taken for the B.Ed. degree, students must obtain second class standing or better in no fewer than six, of which four must be senior courses.
2. Philosophy and psychology courses are not accepted as options.
3. Each candidate is advised to present a four-or five-course major for graduation.
4. Senior Arts and Science courses are numbered 300 or higher.
5. Physical Science 341 is not acceptable in a program including a course in chemistry, physics, astronomy, or geology.
6. Home Economics courses are not acceptable in this program.

**Specialization****Elementary Route Majors**

in consultation with staff advisers students may arrange for an elementary route major in one of the following areas:

1. English: English 200 or 230 or 240, English 398, one of Ed.CI 320, 322 or 338, and two other English courses.
2. Social Science: Geography 201, History 200 or 201 or 210, Ed.CI 306, and two other social science courses.
3. Science: Science of the first year, Ed.CI 330 and three other science courses.
4. Art Ed.CI 252 and three other art courses.
5. Music: Ed.CI 254 and three other music courses.
6. Primary Education: Methods of the second year, and Ed.CI 320 and Ed.CI 324.
7. Intermediate Grade Education: Methods of the second year, and two from Ed.CI 306, 332, 328, 330, 338.
8. Opportunity Room Education: \* Ed. PSY 276, 476 and two from Ed. PSY 310, Ed.CI 324, Ed. 370Su, Ed. 372, Ed. 470Su, Ed. PSY 354.

\*\*A Senior Education option may be chosen in the fourth year only when it is part of one of the recognized majors described below.

\*Note: Certain specialized courses for teachers of the deaf and hard of hearing being offered by the University of Saskatchewan are accepted for credit on this minor. Interested students should consult the Dean.



**FACULTY OF EDUCATION**

**B.—Standard Secondary B.Ed. Route**

This program is open only to students who have clear matriculation into the Faculty of Education.

Upon completion of the first two years, candidates are eligible for the Interim Standard S Certificate, valid in Grades IV to XI; completion of three years earns the interim Professional Certificate, valid in Grades I to XII; completion of four years, the B.Ed. degree.

**MAJOR AND MINOR FIELDS**

Candidates must select (a) a major field of study, and (b) a minor field. Minimum requirements for the B.Ed. degree include **either** five courses on the major and two on the minor, **or** four courses on the major and three on the minor. These courses must be chosen according to the patterns listed below. Junior courses must be so selected as to permit entry to the senior courses required in the last two years.

**N.B.—If the major is chosen from groups I to IX, the minor may be chosen from any other group. If, however, the major is chosen from groups X to XV, the minor must be chosen from groups I to IX.**

**Groups for Majors and Minor**

Group	Major	Minor
I. English	1. English 200 or 230 or 240 2. English 386 or 388 3. {Any <b>three</b> senior 4. {English Courses*	1. English 200 or 230 or 240 2. {any <b>two</b> senior English 3. {courses
	*A course in North American Literature is recommended.	
II. French	1. French 200 2. French 350 or 330 3. French 330 or 350 4. Senior French course 5. Senior French course	1. French 200 2. French 350 3. French 330
	Note: Linguistics 430 to be accepted in lieu of item 4 or 5 for French majors.	
III. German	1. German 200 2. German 350 3. German 400 or 450 4. Senior German Course 5. Senior German Course	1. German 200 2. German 350 3. German 400 or 450
IV. Latin	1. Latin 200 2. {Two of: Latin 300, 3. {353, 354, or 355 4. Senior Latin course 5. One of an additional senior Latin course, or Classics 350 or 351 or Roman History 353	1. Latin 200 2. {Any <b>two</b> senior Latin 3. {courses

Group	Major	Minor
V. Other Foreign languages	Five approved courses	Three approved courses
VI. Social Sciences*	<ol style="list-style-type: none"> <li>History 200, 201 or 210</li> <li>Geography 300</li> <li>One of the following sequences:               <ol style="list-style-type: none"> <li>Political Science 200 and 330</li> <li>Economics 200 and 390</li> <li>Sociology 320 and one other senior course in sociology</li> <li>Any <b>two</b> approved senior history courses**</li> </ol> </li> <li>An approved senior history course or Classics 352**</li> </ol>	<ol style="list-style-type: none"> <li>History 200, 201 or 210</li> <li>Geography 300 or Political Science 200 or Economics 200</li> <li>An approved senior history course**</li> </ol>
	*Geography 201 is recommended as a science option.	
	**History 200 or 201 must be followed by a senior course in Canadian or American History or Political Science 320 or Economics 310; History 210 must be followed by a senior course in European History.	
VII. Mathematics	<ol style="list-style-type: none"> <li>Mathematics 200 or 201</li> <li>Mathematics 270</li> <li>Statistics 255</li> <li>Senior Mathematics course</li> <li>Senior Mathematics course</li> </ol>	<ol style="list-style-type: none"> <li>Mathematics 200 or 201</li> <li>Two of: Mathematics 270, 304, Statistics 255</li> </ol>
VII. Biological Sciences****	<ol style="list-style-type: none"> <li>Botany 201</li> <li>Zoology 220</li> <li>One of Botany 300, 330, 340 or other approved senior courses.</li> <li>One of Zoology 300, 350; 406 and 408; 410; Anatomy 310</li> <li>One of Entomology 301, Genetics 451 or 452, Horticulture 341; or another course from 3 or 4 (above)</li> </ol>	<ol style="list-style-type: none"> <li>Botany 201</li> <li>Zoology 220</li> <li>Any one of major items 3 to 4</li> </ol>
IX. Physical Sciences*	<ol style="list-style-type: none"> <li>Chemistry 230</li> <li>Physics 100** or 200 or 240</li> <li>One of Chemistry 350, 370, 312</li> <li>One of Physics 200 or 240; 340 or 380; 360; 400</li> </ol>	<ol style="list-style-type: none"> <li>Chemistry 230</li> <li>Physics 100*** or 200 or 240</li> <li>Any one of major items 3 or 4</li> </ol>

\*Careful attention should be given to the Mathematics and Physics prerequisites for the courses listed in 2 and 4 (above). Some students will have to take Mathematics 200 or 201 as their third year Arts and Science option.

\*\*For students lacking Physics 30 the major must be Chemistry 230, Physics 100, a Chemistry course from item 3, Physics 240, Physics 340.

\*\*\*For students lacking Physics 30 the minor must be Chemistry 230, Physics 100, Physics 240. (Physics 240 requires Mathematics 200 as a prerequisite or Mathematics 201 as a corequisite.)

\*\*\*\*All Biological Sciences majors must take a course in organic chemistry. Those with a minor in physical sciences will take Chemistry 350, either as the third course on their minor program, or as their third year Arts and Science option. Those with a minor in other subjects will take Chemistry 250 as their third year Arts and Science option.

Group	Major	Minor
	5. One of Geography 201 Geology 201, Astronomy 253 or 410, or another course from 3 or 4 (above)	
X. Fine Arts*		
Art	1. Art 230 2. Art 240 3. Art 300 4. Art 330 5. Art 400 or Philosophy 350 6. Art 250	1. Art 230 2. Two other Art courses 3. except Art 240
Music	1. Music 200 2. Music 300 or 250 3. Two of: Music 250, 300, 4. 350, 400, 311** 5. Philosophy 350	1. Music 200 2. Music 250 or 300 3. One other Music course
Drama	1. Drama 250 2. Drama 480 3. Two of: Drama 360, 300, 4. 400, 350 5. Philosophy 350	1. Drama 250 2. Drama 360 or 350 3. One other Drama course
*Students wishing to cover two Fine Arts fields in their major may do so by completing a minimum of two courses in each field.		
**This band course requires extensive prerequisites and may be chosen only with the consent of the Division.		
XI. Household Economics	1. Household Economics 202 2. Household Economics 210 3. Household Economics 350 4. Household Economics 450* 5. Household Economics 460	1. Household Economics 202 2. Household Economics 210 3. Household Economics 350* or 450
*The science option must be Chemistry 250 or 350.		
XII. Business Education	1. Education Bus. 246 and 345 or 346 2. Education Bus. 248 and 347 or 348 3. Three of: Education Bus. 350, 4. Commercial Law, Business 5. Administration 200 and Accounting 200 and 300	1. Education Bus. 246 and 345 or 346 2. Education Bus. 248 and 347 or 348 3. Any one of major items 3, 4 or 5

Group	Major	Minor
XIII. Physical Education*	1. Physical Education 236 2. Physical Education 336 3. Physical Education 436 4. Physical Education 442, 401, 403 *A four-course major only.	1. Physical Education 236 2. Physical Education 336 3. Physical Education 405, 407, 401, 403.
XIV. Health Education	NONE	1. Physical Education 392 2. Education 310 3. One other course in health Education
XV. Industrial Arts	1. Ed.I.A. 241, 341 2. Ed.I.A. 242 3. Ed.I.A. 244 4. Ed.I.A. 246 5. One of: Ed.I.A. 248, 342, 344, 346; or Art 240, 400, Philosophy 350.	

### SECONDARY ROUTE PROGRAM

#### First year

1. Ed.FDN 201: Introduction to Education.
2. Ed.ADM 261: Educational Administration.
3. English 200 or 230 or 240.
4. Ed. PSY 276: Introduction to Educational Psychology.
5. Arts and Science (Major)\*.
6. Arts and Science (minor)\*\*.
7. Physical Education.

\*Unless the major field is English, Physical Education, Fine Arts or Industrial Arts.

\*\*Unless the minor field is English, Physical Education or Fine Arts.

#### Second Year

(For special transfer second year, secondary route, see C below.)

1. Ed. ADM 261: Educational Administration.
2. Two of Ed.CI 261, 263, 271, 273, 275, 277, 281, 283, 285, 287, 289, 291.
3. Ed.CI 300: Student Teaching.
4. Arts and Science (Major)
5. Arts and Science (Minor)

#### Third Year

1. Ed. PSY 476: Educational Psychology.
2. Phil. 240, 260, 352, or 354. (Phil. 246 or 356 may be offered by Roman Catholic students.)
3. Senior Education option.
4. Senior Arts and Science (major).
5. Jr. or Sr. Arts and Science option\*.

\*This must be a Division "C" option for those whose programs have not yet included such an option. (See General Note 2, below.)

#### Fourth Year

1. Ed.EDN 492: Philosophy of Education.
2. Senior Education option.
3. Sr. Arts and Science (major).
4. Sr. Arts and Science (major or minor).
5. Sr. Arts and Science option.

#### General Notes

1. **Philosophy and psychology courses are not accepted as options.**
2. **Students must include a Division "C" option (mathematics or science) as a requirement for the B.Ed. degree. A laboratory science is recommended.**
3. **Graduation Requirement: Of the courses taken from the B.Ed. degree, students must obtain second class standing or better in no fewer than SIX, of which at least FOUR must be senior courses.**

#### C.—Special Second Year for Certificated Teachers

##### Transfer Year: Four-Year B.Ed. Program

Certificated teachers are granted credit for the first year of the general B.Ed. program on the strength of their Normal School or Junior E training, provided that this training was of not less than seven months' duration.

If such certificated teachers have clear matriculation into the Faculty of Education, they will be admitted to the second year of the program. A special program for the second year is provided in order that all essential courses will be included.

It will be noted that candidates taking the elementary route have six courses to do; those entering the secondary route have seven. The reason for this extra load is that all one-year training was in the field of elementary education.

Students take five courses in a winter session. A summer session is required to complete the **transfer** second year.

#### Second Year

##### Elementary Route

1. Ed. Fdn. 200\*.
2. English 200 or 230 or 240.
3. History 200 or 201 or 210.
4. Science: one of Bot. 205, Zoo. 222, Geog. 201.
5. English 398 or Art 230 or Music 200.
6. Arts and Science or Sr. EducationElementary Route: option.

##### Secondary Route

1. Sociology 202.
2. English 200 or 230 or 240.
3. Ed. 280\*.
4. Major.
5. Minor.
6. Major.
7. Minor.

\*Some observation and student teaching may be required of students registered in these courses. In winter session students must choose two curriculum and instruction courses.

#### Third and Fourth Years

As prescribed for these years in the regular programs for the B.Ed. degree—elementary or secondary route. Candidates in the elementary route are required to include English 398 (Children's Literature) in their programs.

#### Special Programs

In all special programs, students may qualify for the Interim Standard S Certificate, valid in Grades IV to XI, at the end of the second year.

**D.—B.Ed. in Industrial Arts**

August 14 is the last day for receiving applications for admission to the first year of the B.Ed. in Industrial Arts Program.

Candidates wishing to prepare for teaching in general shop should follow the program headed Basic General Program. It provides for certification on the completion of the second and third years and for the B.Ed. in Industrial Arts degree on completion of the fourth year. Candidates proposing to specialize in unit shop will find details under the heading Special Programs below.

The first three years of the Basic General Program are offered only at Calgary; the fourth year at Edmonton and Calgary.

A few Industrial Arts courses will be offered each year at the Summer Session in Calgary. These are primarily for the convenience of students in the B.Ed. Program, Secondary Route, who wish to major in Industrial Arts. Industrial Arts certificates. Course requirements are shown in Section XIV.

**Basic General Program****First Year**

1. Ed.FDN 201: Introduction to Education.
2. Physical Education 201: Physical Education.
3. Sociology 202.
4. Ed.PSY 276: Introduction to Educational Psychology.
5. A junior Arts option.
6. Ed.IA 241: Mechanical Drawing.
7. Ed.IA 242: Woodwork.
8. Ed.IA 246: Metalwork.

**Second Year**

1. English 240.
  2. Ed.ADM 261: Educational Administration.
  3. Ed.IA 280: Education Method (Grades VII to XII).
  4. Ed.CI 300: Observation and Student Teaching.
  5. Ed.IA 341: Mechanical Drawing.
  6. Ed.IA 244: Electricity.
  7. Ed.IA 342: Woodwork.
- Certification: Interim Standard S Certificate.

**Third Year**

1. Philosophy 240: General History of Thought, or alternate philosophy course.
  2. A junior or senior A, B, C option.
  3. A senior A, B, C option.
  4. Ed.IA 248: Auto Mechanics.
  5. Ed.IA 441: Woodwork.
  6. Ed.IA 346: Metalwork.
- Certification: Interim Professional Certificate.

**Fourth Year**

1. Ed.FDN 492: Philosophy of Education.
2. Ed.PSY 476: Educational Psychology.
3. A senior A, B, C option.



4. Ed.IA 347: Auto Mechanics.
5. Ed.IA 344: Electricity.
6. Ed.IA 349: Handicrafts.
7. Ed.IA 345: Welding.

### General Notes

1. **Graduation Requirement:** Of the courses taken for the B.Ed. in Industrial Arts degree, students must obtain second class standing or better in no fewer than SIX; THREE must be Junior or Senior Arts and Science or Senior Education courses.

### Special Programs for Teachers of Unit Shop Subjects

Candidates may follow one of three routes according to their status on entry. In all cases a regular matriculation standing is required.

Route 1: (This program may be entered only with permission of the Dean) For those who propose to specialize in Unit Shop subject in the third year. Students in this program may by completing requirements of the B.Ed. in Industrial Arts degree, and by completing fifteen months of approved industrial experience, qualify for a certificate of apprenticeship from the Apprenticeship Board of Alberta.

**This regulation is to be effective immediately.**

**Approved industrial experience** is interpreted to mean that the candidate has filed an apprenticeship application with the Apprenticeship Board at the time of commencement of industrial experience. The Apprenticeship Board should be advised of changes of place of employment in order that progress may be checked by the field staff.

**Qualify for Certificate of Apprenticeship** is interpreted to mean that the candidate has passed a fourth year apprenticeship examination.

Route 2. For those with Alberta journeyman's status in a unit shop specialty offered in Alberta high schools. A special three-year program is required as detailed below.

Route 3. For those who have completed an approved two-year program at the Institute of Technology and Art and who have completed a minimum of ten months' approved work in industry. The same three-year program is required as in Route 2.

**Route 1.** The first and second years of the basic general program will be followed. The third year becomes one of unit shop specialization. It may be entered only upon the recommendation of the Dean.

### Third Year (Unit Shop Program)

1. A junior or senior Arts and Science option\*.
2. A junior or senior Arts and Science option\*.
3. Unit shop in Wood—  
Ed.IA 441.  
Shop, 4½ days per week  
**or**
3. Unit Shop in Auto Mechanics—  
Shop, 5 days per week  
**or**
3. Unit Shop in Electricity—  
Shop, 4 days per week  
Ed.IA 344  
**or**
3. Unit shop in Metal—  
Shop, 5 days per week

Certification: Interim Professional Certificate.

**Fourth Year**

1. Ed.FDN 492.
2. Ed.PSY 476.
3. 4, 5: Sr. Arts Science options.

The programs in unit shop will ordinarily continue for some weeks beyond the University term in the spring. For details on this point, consult or write the Dean, Calgary. Regular examinations will be written in EdIA 441 and 344 where taken. Shop performance will be appropriately assessed and marks recorded.

**Route 2.** Candidates who have acquired Alberta journeyman's status in an area of unit shop specialization taught in Alberta high schools and who present clear matriculation to the Faculty of Education may enter upon a special three-year program leading to certification and a degree.

(a) **First Year:** advance credit.

(b) **Special Second Year:**

1. English 200 or 210 or 230 or 240
2. Ed.PSY 276—Introduction to Educational Psychology.
3. EdADM 261—Administration
4. Ed.IA 280 (Curriculum and Instruction in Industrial Arts).
5. Ed.CI 300—Practice Teaching
6. One junior Arts and Science option  
(Certification: Interim Standard S Certificates.

(c) **Special Third Year:**

1. One shop course in Unit shop in area of Journeyman's Specialization
2. One shop course (approved option)
3. Ed.IA 241.
4. Junior Arts and Science option (minor field)
5. Senior Arts and Science option  
(Certification: Interim Standard S Certificate.
6. Philosophy 240 or alternate

(d) **Special Fourth Year:**

1. Ed.PSY 476—Senior Psychology
2. Ed.FDN 492—Philosophy of Education
3. One senior Arts and Science option (minor field)
4. One senior Arts and Science option
5. One senior Arts and Science option  
(Qualifies for the B.Ed. degree in Industrial Arts.)  
(Certification: Interim Professional Certificates.

**Note:** The intent of this change is to bring the Route 2 program in line with the rearrangement of the basic programs as outlined above.

**Route 3.** For information about the special \*two-year program at the Southern Alberta Institute of Technology at Calgary, candidates should write direct to the Principal of the Institute. The subsequent University program is that detailed for Route 2.

\*At the present time approved courses are (a) Automotives, (b) Electricity and (c) Drafting. Graduates of other Institute of Technology courses may be granted credit on an individual basis for unit courses which were completed during their program of instruction.

**E. B.Ed. Programs for Holders of Approved Degrees**

**Program For Teachers in the Secondary School**

- (1) Ed.ADM 461: Educational Administration (2-0; 2-0)
- (2) Ed.PSY 476: Educational Psychology (3-0; 3-0)
- (3) Ed.CI 400: Observation and Student Teaching
- (4) Ed.FDN 492: Philosophy of Education (3-0; 3-0)
- (5) Ed.CI: Curriculum and Instruction in the Secondary School (4-0; 4-0) (two sections)
- (6) Ed.FDN 414: Educational Sociology (3-0; 3-0) **or**  
Ed.PSY 478: Measurement and Evaluation (3-0; 3-0)  
(Satisfactory completion of these six courses permits the student to obtain the Interim Professional Certificate.)
- (7) Ed.PSY 478 or Ed.FDN 414
- (8) Approved Senior Education Option
- (9) Approved Senior Education Option
- (10) Approved Senior Arts and Science Option
- (11) Approved Senior Arts and Science Option
- (12) Approved Senior Arts and Science Option  
(Satisfactory completion of all twelve courses permits the student to obtain the B.Ed. degree: also see notes below.)

**General Notes:**

1. Students who present a degree which does not contain the equivalent of a major and a minor as required in the regular secondary route B.Ed. will be required to make up such deficiencies before proceeding with this program.
- \*2. Beginning in September, 1963 a student will be required to present a basic course in psychology as a prerequisite for Ed.PSY 476.
- \*3. Beginning in September, 1963 a student will be required to present a basic course in philosophy as a prerequisite for Ed.FDN 492.
4. Provision is made for the planning of the options to provide for further specialization in subjects fields, guidance and counselling, library science, and the like.
5. Students must obtain a second class standing or better in at least four of the courses taken toward the B.Ed. degree.
6. Students interested in qualifying for a Master's degree rather than for the B.Ed., following the Professional Certificate year should consult the appropriate division or department regarding requirements for graduate study.

**Program For Teachers in the Elementary School**

- (1) Ed.ADM 461: Educational Administration (2-0; 2-0)
- (2) Ed.PSY 476: Educational Psychology (3-0; 3-0)
- (3) Ed.CI 400: Observation and Student Teaching
- (4) Ed.FDN 492: Philosophy of Education (3-0; 3-0)
- (5) Ed.CI 484: Curriculum and Instruction in the Elementary School, I (3-3; 3-3)
- (6) Ed.CI 486: Curriculum and Instruction in the Elementary School, II (3-1; 3-1)  
(Satisfactory completion of these six courses permits the student to obtain the Interim Professional Certificate.)
- (7) Approved Senior Education Option

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\*Otherwise qualified Honors graduates lacking these prerequisites may be given special consideration by the Dean.

- (8) Approved Senior Education Option
- (9) Approved Senior Education Option
- (10) Approved Senior Arts and Science Option
- (11) Approved Senior Arts and Science Option
- (12) Approved Senior Arts and Science Option  
(Satisfactory completion of all twelve courses permits the student to obtain the B.Ed. degree; also see notes below.)

### General Notes:

- 1. Students who present a degree which does not contain course work suitable for teaching in the elementary school will be required to make up such deficiencies before proceeding with this program.
- \*2. Beginning in September, 1963 a student will be required to present a basic course in psychology as a prerequisite for Ed.PSY 476.
- \*3. Beginning in September, 1963 a student will be required to present a basic course in philosophy as a prerequisite for Ed.FDN 492.
- 4. Provision is made for the planning of options to provide for specialization in subject fields, primary education reading, education of exceptional children, and the like.
- 5. Students must obtain a second class standing or better in at least four of the courses taken toward the B.Ed. degree.
- 6. Certificated students interested in qualifying for a Master's degree rather than for the B.Ed., should consult the appropriate division or department regarding requirements for graduate study.  
\*Otherwise qualified Honors graduates lacking these prerequisites may be given special consideration by the Dean.

## F.—Advanced Study in Education

### 1. Graduate Degrees in Education

All candidates for advanced degrees register with the Faculty of Graduate Studies which administers graduate programs throughout the University.

In the Faculty of Education graduate work is offered for the preparation of teachers, supervisors, guidance workers, administrators and other educational specialists, and may lead to the degrees of Master of Education, Doctor of Education, and Doctor of Philosophy. Candidates for these advanced degrees specialize in terms of the divisional organization of the Faculty of Education as follows:

**Division of Elementary Education:** curriculum and instruction in kindergarten, primary, and elementary education. Chairman—Dr. W. Worth.

**Division of Secondary Education:** curriculum and instruction in secondary education (Grades VII-XII), educational history, philosophy, and sociology. Chairman—Dr. L. Downey.

**Division of Educational Foundations:** philosophy, sociology, and history of education. Chairman—Dr. B. E. Walker.

**Division of Educational Psychology:** child and adolescent psychology, educational psychology, guidance, mental hygiene, special education, clinical psychology, tests and measurements. Chairman—Dr. G. M. Dunlop.

**Division of Educational Administration:** school administration elementary and secondary, general supervision, school finance and business administration, chief administrative roles. Chairman—Dr. A. W. Reeves.

In order to meet the needs and interests of candidates, the divisions permit considerable flexibility in the programs leading to advanced degrees. In general, students pattern their courses from the offerings of the division of their choice

supplemented by approved courses from other divisions and departments of the University. Normally a candidate for the master's degree must present a program consisting of six courses and a minor thesis. A candidate for the doctor's degree (if he already holds a master's degree) is normally required to spend two academic years in study and research in residence at the University of Alberta.

Graduate courses in education are offered in both the regular and the summer session. Candidates for the master's degree may meet the residence requirement through summer sessions only. The full residence requirement for the doctor's degree may not be met in this way.

**Initial Procedure: Students who wish to inquire about graduate programs should address all preliminary inquiries to the Dean of the Faculty of Graduate Studies, University of Alberta, Edmonton.**

After a student has decided upon an area of specialization, he should communicate directly with the appropriate divisional chairman and, if possible, arrange for an interview. By this means the student's eligibility will be determined and further information given about the degree programs available in the Division.

## II. Non-Degree Programs

A student holding a B.Ed. degree or the equivalent and not desiring to register for a graduate degree or not meeting all the requirements for admission to the Faculty or Graduate Studies, may register in the Faculty of Education as a **special** student.

## VII—DETAILS OF COURSES

**Note:** The hours of instruction per week for both terms are shown at the top of each course description. The first figure in each term indicates lecture hours and the second laboratory hours. Courses which may be taught in either term are indicated by the words "half-year". Even numbered courses are full courses; odd numbered courses are half courses.

### STAFF OF THE FACULTY OF EDUCATION, CALGARY

Dean—H. S. Baker.

#### DEPARTMENT OF CURRICULUM AND INSTRUCTION:

Professor—T. G. Finn.

Associate Professors—F. E. Churchley, A. A. Gibb, E. M. King, S. A. Lindstedt, B. M. Newton, S. Norris, H. B. Stadelbauer.

Assistant Professors—M. A. Beaton, M. Chorny, E. M. Dodd, Q. D. Doolittle, P. Eccles, S. G. Finn, W. E. Gandy, H. Kiyooka, D. Mackintosh.

#### DEPARTMENT OF FOUNDATIONS OF EDUCATION:

Associate Professors—R. N. Anderson, H. Zentner.

Assistant Professor—J. E. Bowen.

#### DEPARTMENT OF EDUCATIONAL PSYCHOLOGY:

Professor—J. G. Woodsworth.

Associate Professor—A. G. Storey.

Assistant Professors—B. P. Frost, J. G. Snider.

#### DEPARTMENT OF EDUCATION ADMINISTRATION:

Associate Professor—J. D. Aikenhead.

Assistant Professor—A. L. Brown.

- Ed.CI 234.—**Music Education** (3-1; 3-1)  
Open to Education students without music training adequate for admission to Music 200. Voice production, sight reading, ear training, rudiments of music, music history. Introduction to form. Instruments of the orchestra.
- Ed.CI 252.—**Art** (3L; 3L)  
The development of each student of an appreciation of art; the study of art as a medium of creative expression by children; and the development by each student of some degree of skill in handling the media used in the school programs.
- Ed.CI 254.—**Music** (3L; 3L)  
A laboratory course designed to prepare teachers for effective music teaching in the schools; survey of songs, instrumental composition, and recordings; effective performance and listening techniques; values of techniques of notation; rhythmic and creative activities.
- Ed.CI 261.—**Curriculum and Instruction in Secondary School English**—M. Chorny (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in English.
- Ed.CI 263.—**Curriculum and Instruction in Secondary School Foreign Languages**—G. L'Abbe (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in a foreign language.
- Ed.CI 271.—**Curriculum and Instruction in Secondary School Social Studies**—W. Gandy (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in required social sciences.
- Ed.CI 273.—**Curriculum and Instruction in Secondary School Mathematics**—M. Beaton (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in mathematics.
- Ed.CI 275.—**Curriculum and Instruction in Secondary School Biological Sciences**—P. Eccles (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in biological sciences.
- Ed.CI 277.—**Curriculum and Instruction in Secondary School Physical Sciences**—S. Norris (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in the physical sciences.
- Ed.CI 280.—**Education Method** (3-0; 3-0)  
Subject matter organization and method in the secondary school. Required of all candidates qualifying for the Standard S Certificate in the Summer Session. The course will be presented in subject matter sections. Each student is required to elect only one of these sections. Prerequisites or corequisites: One year of successful teaching. Two full courses in the major or the minor teaching field.  
**Note:** Registration in Ed.CI 280 will not be accepted from students who will be continuing their undergraduate studies in the winter season.
- Ed.CI 281.—**Curriculum and Instruction in Secondary School Art**—Helen Stadelbauer (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in art.
- Ed.CI 283.—**Curriculum and Instruction in Secondary School Music**—F. E. Churchley (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in music or permission of instructor.
- Ed.CI 284.—**Social Studies**—T. G. Finn, W. Gandy (3-0; 3-0)  
Selection, organization, development and evaluation of enterprises; the social studies-language program in junior high school grades; audio-



visual materials; library and reading problems in the social studies. There will be observation and teaching in Grades I-IX.

Ed.CI 286.—**Mathematics and Science**—M. Beaton, P. Eccles, S. A. Lindstedt. (3-0; 3-0)

Aims and objectives of mathematics and science education in the elementary school; appropriate classroom activities and the development of representative units in the specific content areas involved.

Ed.CI 288.—**Reading and Language**—Bertha Newton (3-1; 3-1)

A study of the elementary school program in the language arts including reading, literature, language, spelling, handwriting, speech training and choral speaking, with emphasis on objectives, content, methods and materials.

Ed.CI 291.—**Curriculum and Instruction in Secondary School Physical Education**—D. F. Macintosh (2-0; 2-0)

Prerequisites and corequisites: Two full courses in physical education.

Ed.CI 300.—**Observation and Student Teaching**—J. D. Aikenhead and Staff (100 hours)

Ed.CI 306.—**Enterprise Education**—T. G. Finn and W. Gandy (3-0; 3-0)

A course for certificated teachers. This course is designed to establish a firmer appreciation of the principles basic to the enterprise method and to assist teachers to improve their competence where deficiencies in the use of the enterprise method are most apparent.

Prerequisites: Ed. 206 or EdCI 284 or permission of instructor.

Ed.CI 320.—**Reading at the Primary Level**—Bertha Newton (3-0; 3-0)

Readiness for reading, development of fundamental reading abilities, selection of materials of instruction, and organization of the reading program.

Prerequisites: Ed. 222 or Ed.CI 288 or permission of instructor.

EdCI 322.—**Reading at the Upper Elementary and Secondary Levels**—Not offered 1962-63 (3-0; 3-0)

Organization of the basic reading program, reading problems in the content subjects, individualized instruction, and the selection of reading materials

Prerequisites: EdCI 222 or Ed.CI 288 or permission of instructor.

EdCI 324.—**Expressional Activities for the Primary Grades**—Not offered 1962-63 (3-0; 3-0)

A course in the content and organization of the program in language, dramatization, art, music, rhythms and play for the kindergarten and primary grades.

Ed.CI 328.—**Arithmetic in the Elementary and Junior High School Grades**—S. A. Lindstedt (3-0; 3-0)

The mathematics curriculum; content, methods, instructional materials, evaluation; diagnosis and treatment of learning difficulties; and experimental programs.

Prerequisites: EdCI 286 or EdCI 273 or permission of instructor.

Ed.CI 330.—**Science in the Elementary and Junior High School Grades**—P. Eccles (3-0; 3-0)

A course in the teaching of science programs of the elementary and junior high school grades; development of appropriate laboratory equipment; selection of materials of instruction; field work.

Prerequisite Ed.CI 286 or EdCI 275 or 277 or permission of instructor.

Ed.CI 338.—**Language Arts in the Elementary and Junior High School Grades**—Not offered 1962-63 (3-0; 3-0)

The language arts curriculum: objectives, criteria for selection of content, and evaluation of oral and written English.

Prerequisites: Ed. 222 or EdCI 288 or EdCI 261 or permission of instructor.

- EdCI 380.—**Curriculum and Instruction in the Secondary School**—Staff (3-0; 3-0)  
Each student will select one of the subject fields of a major or minor as offered.  
Prerequisites: A basic course in educational method and two content courses in the chosen field. (In mathematics one of the prerequisites must be Mathematics 270.)
- Ed.CI 400.—**Observation and Student Teaching**—J. D. Aikenhead (100 hours)  
All students in B.Ed. programs for holders of approved degrees will engage in the following activities: (a) four days (during Registration Week) of classroom orientation and observation (b) three weeks (half days only) of observation and student teaching in each of the fall and spring terms (c) two weeks (full-time) of observation and student teaching during the latter part of April or early in May.
- Ed.CI 461.—**Curriculum and Instruction in Secondary School English**—M. Chorny (2-0; 2-0)  
\* Prerequisites or corequisites: Two full courses in English.
- EdCI 462.—**Curriculum and Instruction in Secondary School English**—M. Chorny (3-0; 3-0)  
Prerequisites: Ed.CI 261 or 461 or equivalent and two content courses in English.
- Ed.CI 463.—**Curriculum and Instruction in Secondary School Foreign Languages**—G. L'Abbe (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in a foreign language.
- Ed.CI 464.—**Curriculum and Instruction in Secondary School Foreign Languages**—Staff. Not offered 1962-63 (3-0; 3-0)  
Prerequisites: Ed.CI 263 or 463 or equivalent and two content courses in foreign languages.
- Ed.CI 471.—**Curriculum and Instruction in Secondary School Social Sciences**—T. G. Finn and W. Gandy (2-0; 2-0)  
Prerequisites: or corequisites: Two full courses in required Social Sciences.
- Ed.CI 472.—**Curriculum and Instruction in Secondary School Social Sciences**—W. G. Gandy (3-0; 3-0)  
Prerequisites: Ed.CI 271 or 471 or equivalent and two content courses in social sciences.
- Ed.CI 473.—**Curriculum and Instruction in Secondary School Mathematics**—S. A. Linstedt (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in mathematics.
- EdCI. 474.—**Curriculum and Instruction in Secondary School Mathematics**—M. Beaton and S. A. Lindstedt (3-0; 3-0)  
Prerequisites: EdCI 273 or 473 or equivalent and two content courses in mathematics. Not offered in 1962-63.
- Ed.CI 475.—**Curriculum and Instruction in Secondary School Biological Sciences**—P. Eccles (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in biological sciences.
- Ed.CI 476.—**Curriculum and Instruction in Secondary School Biological Sciences**—Not offered 1962-63 (3-0; 3-0)  
Prerequisites: Ed.CI 275 or 475 or equivalent and two content courses in biological sciences.

- Ed.CI 477.—**Curriculum and Instruction in Secondary School Physical Sciences**—S. Norris (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in the physical sciences.
- Ed.CI 478.—**Curriculum and Instruction in Secondary School Physical Sciences**—S. Norris (3-0; 3-0)  
Prerequisites: EdCI 277 or 477 or equivalent and two content courses in physical sciences.
- Ed.CI 481.—**Curriculum and Instruction in Secondary School Art**—Helen Stadelbauer (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in art.
- Ed.CI 483.—**Curriculum and Instruction in Secondary School Music**—F. E. Churchley (2-0; 2-0)  
Prerequisites or corequisites: Two full courses in music or permission of instructor.
- Ed.CI 484.—**Curriculum and Instruction in the Elementary School I** (3-3; 3-3)
- Ed.CI 486.—**Curriculum and Instruction in the Elementary School II** (3-1; 3-1)
- Ed.CI 491.—**Curriculum and Instruction in Secondary School Physical Education**—J. Dewar (2-0; 2-0)
- EdCI 494.—**Principles and Practices of the School Program**—G. L'Abbe  
The content of this course is to remain somewhat flexible so that individual needs of teachers registered in the course may be recognized.

## II EDUCATIONAL FOUNDATIONS

- Ed.FDN 200.—**Introduction to Education**—J. Bowen (3-0; 3-0)  
An introductory course in education stressing the historical and sociological approaches to educational problems. Some attention will be given to basic procedures and methods.
- Ed.FDN 201.—**Introduction to Education**—R. N. Anderson and Associates (2-0; 2-0)  
Selected topics from Ed.FDN 200.
- Ed.FDN 414.—**Sociology of the School**—H. Zentner (3-0; 3-0)  
Study of the school as a social institution in the changing society.
- Ed.FDN 492.—**Philosophy of Education**—R. N. Anderson, J. Bowen (3-0; 3-0)  
Philosophical bases of education, with particular reference to values, aims, curriculum, and the educative process.  
Prerequisites: Philosophy 240, 260, 352 or 354 or 360. Philosophy 246 or 356 may be substituted by Roman Catholic Students.

## III EDUCATIONAL PSYCHOLOGY

- Ed.PSY 276.—**Introduction to Educational Psychology**—Staff (3-0; 3-0)  
An introduction to childhood and adolescence, stressing physical, mental, social, emotional, and personality development; the psychology of learning and of the special learning areas; the application of psychological principles to classroom practice.
- Ed.PSY 308.—**Guidance**—J. G. Woodsworth (3-0; 3-0)  
Basic principles and techniques of guidance; case studies, interviews, records, with emphasis on scholastic and personal guidance; introduction to the tests and measures most commonly used in guidance.  
Prerequisites: Ed.PSY 276 or equivalent.

- Ed.PSY 310.—**Mental Hygiene in Teaching**—B. P. Frost (3-0; 3-0)  
Principles of mental hygiene; the dynamics of behavior; mental health of the teacher; classroom application of mental hygiene principles.  
Prerequisites: Ed.PSY 276 or equivalent.
- Ed.PSY 354.—**Psychology and Education of Exceptional Children**—Not offered 1962-63 (3-0; 3-0)  
A survey of the psychology and education of atypical children for whom special education is provided. Educational needs including curricula, teaching methods and classroom organization will be considered.  
Prerequisite: Ed.PSY 276 and two years of successful teaching.
- Ed.PSY 452.—**Psychology and Education of Mentally Handicapped Children**—Not offered 1962-63 (3-0; 3-0)  
The psychology and education of severely mentally retarded and mentally handicapped children with special emphasis on organization, curriculum and methods of teaching.  
Prerequisites: Ed.PSY 354 and two years of successful teaching.
- Ed.PSY 454.—**Psychology and Education of Gifted Children**—Not offered 1962-63 (3-0; 3-0)  
The psychological characteristics of children of superior academic ability; educational provision for superior children including identification, curriculum, teaching methods and classroom organization.  
Prerequisites: Ed.PSY 354 and two years of successful teaching.
- Ed.PSY 456.—**Psychology and Education of Physically Handicapped Children**—Not offered 1962-63 (3-0; 3-0)  
The psychological characteristics of children with orthopaedic and neurological handicaps; appropriate educational provision for them.  
Prerequisites: Ed.PSY 354 and two years of successful teaching.
- Ed.PSY 458.—**Psychology and Education of Emotionally Disturbed Children**—Not offered 1962-63 (3-0; 3-0)  
The psychological characteristics of emotionally disturbed or socially maladjusted children; their education in ordinary and special classrooms.  
Prerequisite: Ed.PSY 354 and two years of successful teaching.
- Ed.PSY 474.—**Education Clinic**—B. P. Frost (3-3; 3-3)  
Training in the measurement of intelligence, achievement, interests, aptitudes and adjustment of school children. Laboratory experience in the Education Clinic in measurement, diagnosis and remedial treatment of school children.  
Prerequisites: Education 476.
- Ed.PSY 476.—**Educational Psychology**—J. G. Woodsworth and Staff (3-0; 3-0)  
Individual differences; psychology of learning and forgetting; motivation; personality, adjustment, and mental hygiene; introduction to evaluation and the testing program.  
Prerequisites: Ed.PSY 276, Psychology 202 or equivalent.
- Ed.PSY 478.—**Measurement and Evaluation** (3-0; 3-0)  
Measurement of classroom achievement; teacher-made and standardized tests; interpretation and use of test results; evaluation of non-academic achievements; recording and reporting pupil progress.  
Prerequisite: Ed.PSY 276 or equivalent.

#### IV EDUCATIONAL ADMINISTRATION

- Ed.ADM 261.—**Educational Administration**—J. D. Aikenhead & A. E. Brown (2-0; 2-0)  
A basic course in educational administration dealing with topics of special significance to the classroom teacher. Topics in this course include: The Alberta School System, Professional Ethics, School Law.

Ed.ADM 461.—**Educational Administration**—A. F. Brown

For holders of B.A., B.Sc., and other degrees. For a description of this course see Ed.ADM 261.

## V INDUSTRIAL ARTS

Ed.IA 241-341.—**Industrial Arts—Mechanical Drawing**—(First and Second Years)—  
G. R. Howarth (1-2; 1-2)

Use and care of drafting instruments and drafting equipment. Single-stroke lettering. Geometric drawing, including angles, polygons, tangents and ellipses, with problems. The making and use of scales. Mechanical and architectural conventions. Conventional drawing of bolts and screws. Simple blueprint reading. Orthographic projection, including sections and auxiliary views. Cabinet and isometric drawing. Shop sketching. Projection perspective and the plan method of mechanical perspective. Assembly and detail drawing. Surface development drawing, including shapes based on type forms and triangular methods. Simple building drawing. Drawing of shop projects involving simple design. Tracing and blueprinting.

Ed.IA 242.—**Industrial Arts—Woodwork**—M. McDougall (2-4; 2-4)

Care, adjustment and repair of hand tools. Basic tool procedures involving instruction and practice in the use of all the commonly used hand tools. Wood finishing; application of the elementary types of finishes, paints, stain and varnish, enamel, etc.

Ed.IA 244.—**Industrial Arts—Electricity**—D. Gaudette (3-3; 3-3)

Electron theory; sources of electrical energy; electrical units; electrical circuits; Ohm's Law; Canadian Electrical Code; electro-magnetic induction, Lenz's Law; electrical instruments; direct current motors and generators.

Ed.IA 246.—**Industrial Arts—Metal Work**—J. D. Harron (2-4; 2-4)

Common metals and their alloys; elementary metalurgy; sheet metal work; introduction to welding, forging, casting, heat treating; bench work.

Ed.IA 248.—**Industrial Arts—Automotive Mechanics**—F. Wynne (2-4; 2-4)

The automobile and its power plant; general construction of the automobile; auxiliary systems; fuel, carburetion, lubricating, cooling, clutch and gear box; rear axles; drive shafts and universal joints; front axles and steering gears; brakes; miscellaneous.

Ed.IA 280.—**Educational Method for Industrial Arts Students**—S. A. Lindstedt and  
D. A. Gaudette (3-0; 3-0)

Required of all B.Ed. in Industrial Arts candidates qualifying for the Junior Diploma (Standard S Certificate) in winter session. The first half of the course will be devoted to a study of the basic principles of teaching methods as they apply to a variety of subject areas in the high school. The second half of the course will deal with special methods and techniques specific to industrial arts.

Ed.IA 342.—**Industrial Arts—Woodwork**—M. J. Tomlinson (2-4; 2-4)

Further development of proficiency in using hand tools. Use of wood-working machines of various types. Filing and fitting hand saws. Wood finishing; further development in the application of various types of finishes (stained, shellacked, rubbed and waxed finished).

Prerequisite: Ed.IA 242.

- Ed.IA 344.—**Industrial Arts—Electricity**—M. McDougall (2-4; 2-4)  
Principles of alternating currents; single-phase induction motors; rectifiers; telephones; electronics; electro-magnetic waves; transformers.  
Prerequisite: Ed.IA 244.
- Ed.IA 345.—**Industrial Arts—Welding**—R. Shearer (1-2; 1-2)  
The theory and practice of oxy-acetylene and arc welding.
- Ed.IA 346.—**Industrial Arts—Metal Work**—G. H. Hare (2-4; 2-4)  
Non-Ferrous metals and their alloys; metallurgy; machine shop practice; forging, welding, casting and heat treating continued; advanced drill press and bench work.
- Ed.IA 347.—**Industrial Arts—Automotive Mechanics**—G. A. Sexton (1-2; 1-2)  
Electric circuits of the automobile; battery ignition; generator, starting motor, lighting, horn and accessory circuits; tune-up, trouble diagnosis.  
Prerequisite: Ed.IA 248.
- Ed.IA 349.—**Industrial Arts—Handicrafts**—Marion F. Nicoll 3 hours (half year)  
Procedures, materials and project development in media particularly suitable for the junior high school industrial arts program: leather, plastics, art metal, woodcraft novelties, wood carving.
- Ed.IA 441.—**Industrial Arts—Woodwork**—R. H. Cunningham 6 hours (half year)  
Maintenance work (shop and equipment); refinishing; building construction.  
Prerequisites: Ed.IA 242 and 342.



# *Curriculum Outline*

## *E—The Faculty of Engineering*

### **IMPORTANT NOTICE**

Since this Calendar went to press before program revisions could be notified, this section on the Faculty of Engineering does not include full information required by students planning to follow an Engineering program. Please refer to the revised Faculty of Engineering Calendar for further details.

The Faculty of Engineering administers regular four-year programs leading to the B.Sc. Degree in Chemical, Civil, Electrical, Mechanical, Metallurgical, Mining, and Petroleum Engineering. Special patterns are available in the third and fourth years of some of these programs. In addition, for students obtaining a sufficiently high standing in the work of the first two years programs are available leading to the B.Sc. Degree in Engineering Physics. Instruction in the first two years of Engineering is offered both at the Calgary and Edmonton campus of the University. Instruction in the third and fourth years of Engineering is available only at the Edmonton campus.

A six-year program leading to the degrees of B.A. and B.Sc. may be arranged for students having a sufficiently high High School Standing. Details of this course appear in the calendar of the Faculty of Arts and Science.

Graduate work leading to the M.Sc., and in some cases the Ph.D., degree is offered through the various Engineering Departments under the administration of the Faculty of Graduate Studies. Details of these programs appear in the calendar of the Faculty of Graduate Studies.

### **ADMISSION REQUIREMENTS FOR PROGRAMS LEADING TO THE B.SC. DEGREE IN ENGINEERING**

1. For students who have attended and are completing High School in Alberta, examinations for admission to the University are conducted each year, in June and August, under the authority of the High School and University Matriculation Examination Board. Applications for these examinations should be made about two months before the date of examinations to the Chairman of the High School and University Matriculation Examinations Board, Department of Education, Government Buildings, Edmonton.
2. The standard required for admission to the first year of Engineering is—
  - (a) an Alberta High School Diploma with
  - (b) a "B" or higher standing in each of the following seven courses:
    - (1) Chemistry 30\*
    - (2) English 30
    - (3) French 30, or German 30, or Latin 30
    - (4) Mathematics 30
    - (5) Mathematics 31
    - (6) Physics 30
    - (7) Social Studies 30, and

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\*Students who have passed Chemistry 30 without approved laboratory will be required to satisfy the Department of Chemistry as to their proficiency in laboratory work.

- (c) an average in these courses, excluding Mathematics 31, of at least 60 %.
3. Students who have completed their High School work in Alberta in 1959 or earlier and who have met the admission requirements in effect at the time of their High School graduation will be given special consideration.

**These general regulations notwithstanding, the University may, at its discretion, refuse admission to any applicant. For example, this regulation will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal entrance requirements at the University of Alberta.**

4. To provide only for students who have followed the curriculum in the schools of Alberta to the High School Graduation Diploma without being able to obtain all the required courses because such courses have not been available in their local schools, the Faculty of Arts and Science offers courses at the Grade XII level corresponding to French 30, Latin 30, German 30, Chemistry 30, Mathematics 31 and Physics 30. A maximum of two of these courses (except Mathematics 31) may be taken during the Summer Session by students holding an Alberta High School Diploma and having a B or higher standing in their courses which must include English 30, Social Studies 30, and Mathematics 30. A student who is deficient only in one or two of French 30, Latin 30, German 30, Chemistry 30, Mathematics 31 or Physics 30 may qualify himself for admission to the Faculty of Engineering through attendance at a summer session.
5. Students who have completed their High School work outside Alberta will be judged on the Alberta matriculation standard with their High School credits being evaluated by the Registrar and the Dean.

#### PROCEDURE FOR APPLYING FOR ADMISSION

1. Students who have not previously been registered in the Faculty of Engineering should write to the Registrar and request the application forms and descriptive material.
2. Students who completed the bulk of their high school work two or more years prior to the time of application are required to consult the Dean and the Students Counselling Service by July 31st.
3. The application forms should be completed in all detail and submitted with the appropriate fee\* to the Registrar before August 31st.
4. Students are required to arrange with the Examinations Branch of the Department of Education of the province where their High School Training was obtained for the direct transmission by the Department to the Registrar of two copies of the complete transcript of their High School work.
5. Application must be complete and accompanied by copies of the transcript before they can be accepted. They will be reviewed by the Registrar and the Dean and the applicant will be notified by the Registrar of his acceptability or otherwise.
6. Students who have previously registered in the Faculty of Engineering are not required to reapply for admission to subsequent years and may assume that they are readmissible unless they have been otherwise informed by the Registrar or the Dean.

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\*A fee of \$5.00 is charged for the evaluation of high school documents from provinces other than Alberta; a fee of \$10.00 is charged for the evaluation of high school documents from outside Canada.

**REGISTRATION**

1. All students must register in person at the prescribed time before the start of classes.
2. Students who have been admitted to the Faculty of Engineering for the first time will be informed of the time and place of registration by the Registrar at the time they receive notice of admission.
3. A student is responsible for the completeness and accuracy of his registration. He is also responsible for any adjustment of registration made necessary by the results of supplemental examinations. Particular care should be exercised with regard to the selection of options and patterns where they are available. Registration in courses which directly conflict on the timetable will only be allowed when the permission of the Dean has been secured.
4. Students with registration problems are requested to consult the Dean.
5. Late registration is permitted only in exceptional cases and with the approval of the Dean. If late registration is approved a late registration fee of \$3.00 plus \$1.00 per day is levied.
6. Registration is not complete until fees have been paid, and is subject to cancellation unless payment has been made by the final date according to regulations outlined above.

**PROMOTION REGULATIONS OF FACULTY OF ENGINEERING**

1. A student who has obtained credit in all but one of the courses prescribed for him in any year may be permitted registration in the subsequent year of the program but, if so, will be required to re-register and repeat the failed course.
2. A student who has not obtained credit in all or all but one of the courses prescribed for him in any year is considered to have failed his year and will be denied registration in the subsequent year of the program.
3. A student who has failed two or more of the courses prescribed for him in any year may under special circumstances be permitted to repeat the failed year. Credit may be given in one or more courses previously taken and passed with a grade of 65 percent or higher. In such cases the student may be required to register in additional courses not more than one of which may be a course prescribed in a subsequent year of his program.
4. A student who has obtained credit in all of the courses prescribed for him in the second year of a program may be permitted registration in the third year of a different program but, if so, will be required to register in any course prescribed for the second year of the new program in which he does not have credit.
5. A student will be denied further registration in Engineering if after three academic years he has not qualified for registration in the third year of his program.

**WEIGHTING OF GRADES**

In the computation of student averages for scholarship and other purposes the grades obtained in individual courses are weighed in accordance with weighting factors representing the sum of

- (a) The number of hours per week of lectures for each term, plus
- (b) from one-third to one-half the number of hours per week of laboratory for each term.

Staff

**Associate Professors**—H. R. McArthur (Secretary to the Faculty), W. L. Bigg, P. Glockner, W. H. Stilwell.

**Assistant Professors**—A. G. Doige, R. H. B. Hebbert, H. A. R. de Paiva.

Students seeking details of patterns of study in the Faculty of Engineering, and for details of courses to be offered in 1962-63, are referred to the Calendar to be issued by the Faculty later in the year.

# *F—The School of Household Economics*

## **(1) INTRODUCTION**

Degree courses in Household Economics have been offered at the University of Alberta in Edmonton since 1918, when a department of Household Economics was established. In 1928 the School of Household Economics was organized under the Faculty of Arts and Science.

Students interested in obtaining the degree of Bachelor of Science in Household Economics now undertake a first year program at the University of Alberta, Calgary, and then transfer to the University of Alberta in Edmonton where the remaining subjects may be completed in two years.

## **(2) ADMISSION**

For the degree of B.Sc. in H.Ec.

- (a) A High School diploma with
- (b) "B" or higher standing in
  1. English 30,
  2. Social Studies 30,
  3. Mathematics 30,
  4. French 30 or German 30 or Latin 30,
  5. Chemistry 30, and
  6. Physics 30 or Biology 32 (Preferably Physics).
- (c) an average in these six courses of at least 60%.

Students of the first year are invited to consult the Director with respect to the choice of courses for the senior years so that their programs may form coherent groups of studies in harmony with their main intellectual interests.

## **(3) PROMOTION**

1. To be granted the degree of Bachelor of Science in Household Economics a candidate must obtain a passing mark or better in fifteen courses and obtain an average of 60% in all courses credited towards the degree after the first year.
2. The following combination is counted as a course in the application of these regulations: Household Economics 456, 457 and 459.
3. The promotion of a student from the first to the second year is contingent on the satisfactory completion in one year of a first-year program of normal weight. This regulation applies also to students from other universities.

## **(4) PROGRAM OF STUDY FOR THE B.Sc. DEGREE IN HOUSEHOLD ECONOMICS**

### **First Year (Calgary),**

English 210 or French 200 or German 200 or Latin 200  
Chemistry 230  
Chemistry 250  
Zoology 220  
Economics 200 or a senior option.

## **SECOND AND THIRD YEAR PROGRAMS IN EDMONTON**

### **Second Year**

Approved course from Division A or B: Physiology 360; Biochemistry 300; Household Economics 304; Bacteriology 201, first term; Household Economics 303, second term.

**Third Year**

One course from Division A or B; Household Economics 451, 454, 456, 457, 458, 459; an approved option.

Students interested in clothing and design and not planning to go into Institution work may elect Household Economics 460 instead of Household Economics 451, 454 and 457.

**(5) GRADUATE STUDIES**

Students wishing to pursue graduate work towards the Master's degree should consult the Calendar of the Faculty of Graduate Studies.

Students interested in Education and Household Economics should consult the Calendar of the Faculty of Education.

**(6) DETAILS OF COURSES**

Details of first year courses available in Calgary may be found under the section "Details of Courses" in the Faculty of Arts and Science.



# *G—The Faculties of Medicine and Dentistry*

Although the University of Alberta, Calgary, does not offer instruction in either of these professional fields, students may complete their year of pre-Dental studies in Calgary and admission to both the Faculty of Dentistry and the Faculty of Medicine may be taken in the Faculty of Arts and Science at Calgary.

## **FACULTY OF DENTISTRY**

### **(1) ADMISSION REQUIREMENTS**

#### **Matriculation**

Students from the high schools of Alberta seeking admission into the Faculty of Arts and Science for Dentistry will be required to present:

- (a) A High School diploma with
- (b) "B" or higher standing in
  1. English 30,
  2. Social Studies 30,
  3. Mathematics 30,
  4. Chemistry 30,
  5. Physics 30,
  6. French 30 or German 30 or Latin 30;

- (c) an average in these six courses of at least 60%.

Candidates from outside Alberta will be required to meet equivalent standards.

**Note:** Students who completed Grade XII in 1954 or earlier will be given full consideration for admission. They are advised to write or see the Registrar of the University and to provide a complete transcript of their high school records.

#### **For the Degree of D.D.S.**

The above, plus at least one year in the Faculty of Arts and Science, constitutes matriculation into the first year of Dentistry, leading to the degree of D.D.S.

All students wishing to enter the first professional year of Dentistry are required to make application on or before May 15th. Residents outside Canada must make application on or before April 15. A student proceeding towards a first degree will normally be required to attend at least one academic year as a full-time student. In general, consideration for admission to the limit of available accommodation will be given to those students with an average of at least 65% in all courses taken after senior matriculation.

**It must be distinctly understood that no student can be guaranteed admission to Dentistry on the basis of academic standing alone. Before final acceptance any applicant may be required to satisfy representatives of the faculty at a personal interview. The possession of personal qualities necessary for successful practice will be stressed. Further, any student whose performance in the work of any professional year is unsatisfactory to the Faculty will not be permitted to continue in the study of Dentistry.**

### **(2) PROGRAM OF STUDY**

#### **The Program Leading to the Degree of D.D.S.**

A student may not enter this course unless (a) he has obtained an average of at least 60% in senior matriculation; (b) his registration is approved by the Faculty of Dentistry.

The basic minimum pre-professional requirements for the course leading to the D.D.S. are: one full year of college work after senior matriculation including full college courses in Physics, Inorganic Chemistry, and Zoology.

The subjects in the pre-professional year in the Faculty of Arts and Science are:

Physics 200,	Zoology 220,
Chemistry 230,	One A or B option,
Physical Education,	One approved option.

For courses in Dentistry see the calendar of this faculty.

## THE FACULTY OF MEDICINE

### (1) ADMISSION REQUIREMENTS

#### M.D.

The basic requirements in university credits for admission to the Faculty of Medicine are the satisfactory completion (after senior matriculation) of at least two years of university work approved by the Medical Faculty, including full university courses in organic chemistry, inorganic chemistry, physics and zoology.

Although these four science courses are prerequisites for entrance into the Medical Faculty no special consideration will be given to applicants having other science courses. All students are urged to take the program that they find most interesting, that will still give them these prerequisites.

These requirements can be met in various degree patterns in different faculties.

For information, the Registrar should be consulted.

Owing to limited facilities for instruction it has been found necessary to restrict the number of candidates accepted for entrance into the first year of medicine. Consideration for admission under this quota will be given only to those students who have an over-all average of at least 65% in the work of all preceding university years. While admission to Medicine is based largely on academic standing, the lack of essential personal qualities in an applicant may be deemed sufficient cause for refusal of admission. It should be further noted that any student whose work is unsatisfactory to the Faculty will not be permitted to continue in the study of medicine.

All students who wish to enter the first year of Medicine are required to make application to the Registrar on or before April 3. It is desirable that candidates should arrange a personal interview with the Dean or his appointee.

All successful applicants are required, upon acceptance of a position in first-year Medicine, to make a deposit of \$25.00 to the Bursar of the University. The deposit will be applied on first-year fees when the student registers in the ensuing term. Should a candidate withdraw after once accepting a position, this deposit will be forfeited.

For courses in Medicine see the Calendar of this Faculty.

# *A—The School of Nursing*

## **(1) Programs Offered by the School of Nursing**

The University of Alberta School of Nursing offers the following basic and post-basic professional programs:

### *Undergraduate*

A five-year program leading to the degree, Bachelor of Science in Nursing.

### *Graduate*

A two-year program leading to the degree, Bachelor of Science in Nursing.

A one-year program leading to the Diploma in Public Health Nursing.

A one-year program leading to the Diploma in Teaching and Supervision in Schools of Nursing.

A five-month program leading to the Certificate in Advanced Practical Obstetrics.

## **Description of Programs**

### *Basic Program Leading to the Degree of B.Sc. in Nursing*

The general aim of the degree program is to prepare young women who will be competent to meet their responsibilities in the broad health program of their times.

The program of study is planned to utilize the scientific and liberal arts courses of the University as a background on which to build professional competence.

**The first year of the program may be taken at the University of Alberta in Edmonton or in Calgary.**

The second, third and fourth years are taken at the School of Nursing, University of Alberta Hospital, Edmonton.

The fifth year is taken at the University of Alberta, Edmonton.

The program qualifies the student for first-level positions in hospital and public health fields.

### *Post-Basic Program Leading to the Degree of B.Sc. in Nursing*

This program offers registered nurses the opportunity to qualify for the degree, B.Sc. in Nursing.

The program of study includes courses in the biological, physical, and social sciences, general education and nursing, qualifying the nurse for positions in Schools of Nursing and Public Health Agencies.

### *Program Leading to the Diploma in Public Health Nursing*

The course is designed for registered nurses who wish to prepare themselves to function as staff nurses in official and voluntary public health agencies.

### *Program Leading to the Diploma in Teaching and Supervision in Schools of Nursing*

The program is designed for registered nurses who wish to prepare themselves to function more effectively in administrative, supervisory and teaching activities.

### *Program Leading to the Certificate in Advanced Practical Obstetrics*

The course provides a program of instruction and supervised clinical experiences for nurses who are interested in preparing for positions of responsibility in the field of obstetrical nursing.

**(2) ADMISSION REQUIREMENTS****A.—Basic Program Leading to the Degree of B.Sc. in Nursing**

Students from Alberta high schools seeking admission to the University will be required to present:

- (a) a High School Graduation Diploma with
- (b) "B" or higher standing in the following Grade XII examination subjects:
  1. English 30,
  2. Social Studies 30,
  3. Chemistry 30.
  4. 5 and 6. **Three of:**  
Mathematics 30,  
French 30 or German 30 or Latin 30,  
Physics 30;  
Biology 32;
- (c) an average in these six courses of at least 60%.

**NOTE:** Students who completed Grade XII in 1954 or earlier will be given full consideration for admission. They are advised to write or see the Registrar of the University and to provide a complete transcript of their high school records.

These general regulations notwithstanding, the University may in its discretion refuse admission to any applicant. For example, this regulation normally will be applied in cases where applicants have written an inordinate number of examinations in order to attain nominal entrance requirements at the University of Alberta.

**B.—Post-Basic Program Leading to the Degree of B.Sc. in Nursing**

Applicants must be registered nurses and present evidence of professional competence and the ability to carry and profit from postgraduate study. Students will normally be required to complete at least the year of specialization as a full-time intramural student of the School of Nursing, University of Alberta. Further requirements are:

1. Academic requirements outlined in "A" above.
2. Satisfactory clinical experience, including paediatric nursing, and psychiatric nursing. Applicants must submit a transcript from their Hospital School of Nursing. Deficiencies in clinical experience will have to be made up and arrangements relative to length and type of experience are subject to the approval of the University.

**C.—Program Leading to the Diploma in Public Health Nursing****D.—Program Leading to the Diploma in Teaching and Supervision in Schools of Nursing.****E.—Program Leading to the Certificate in Advanced Practical Obstetrics.**

Applicants must be registered nurses and present evidence of professional competence and the ability to carry and profit from postgraduate study. Preference is given to applicants who meet the academic requirements outlined in "A" above.

**Procedure for Admission to Undergraduate Program:  
Basic Program Leading to B.Sc. in Nursing.**

1. Obtain application forms from the Registrar, University of Alberta.

2. Application forms and medical report form should be completed as outlined in sections of the calendar dealing with admission procedure.

**Note:** During the first year at University, students in B.Sc. Nursing will undergo a further medical examination and interview at the University of Alberta Hospital, and must satisfy the hospital regarding their general suitability for nursing before being accepted into the clinical years of the program (second, third and fourth years of the program). Arrangements for the medical examination and interview at the hospital will be made by the School of Nursing during the first year at University.

#### **Procedure for Admission to Graduate Programs:**

**Post Basic Program Leading to the Degree of B.Sc. in Nursing.**

**Program Leading to the Diploma in Public Health Nursing.**

**Program Leading to the Diploma in Teaching and Supervision in Schools of Nursing.**

**Program Leading to the Certificate in Advanced Practical Obstetrics.**

1. Obtain application forms from the Registrar, University of Alberta.
2. The completed forms should be returned to the Registrar. This includes:
  - (a) The University Application for Admission.
  - (b) The Graduate Nurse Information Form.
  - (c) Two Official High School Transcripts.
  - (d) Transcript of School of Nursing Record.

### **(3) PROMOTION AND GRADUATION**

In addition to the information given below, students should read carefully the regulations concerning attendance, examinations, and promotions, found in Part II of this calendar, as these also are applicable to students in the School of Nursing.

1. Students who have not cleared their first year will not be permitted to register for the second year of the degree program.
2. First-year students with **one** supplemental will be allowed to start the second year of the degree program. Failure to pass the supplemental will result in their being asked to withdraw from the degree program.
3. First-year students with **two** supplementals will be required to clear at least one course at Summer School to entitle them to the privileges outlined for the student with one supplemental.
4. Students registered in the second, third, and fourth years of the degree program are subject to the regulations governing promotion and graduation as outlined in the calendar of the affiliating school.
5. Students registered in the final year of the degree program, in one of the one-year diploma courses, or in the certificate course must obtain a weighted average of at least 65%. Three supplemental examinations for the purpose of raising the average may be granted. Which supplemental examination may be written will be decided by the Academic Staff of the School of Nursing.
6. Students who have unexcused absences totalling **one-eighth** of the total number of lectures in each course may be refused permission to write the final examination.

7. Field experience must be completed before a student will be recommended to General Faculty Council for the degree, diploma, or certificate for which she is a candidate.
8. No student registered in the post-basic program may proceed to the work of the next year without having completed satisfactorily the clinical experience as outlined in the calendar.

#### (4) PROGRAMS OF STUDY

**Note:** Except in Advanced Practical Obstetrics, the weekly hours of instruction for various courses are set out for both terms of the winter session. The letter "c" attached to a figure signifies clinic-hours, and the letter "s" seminar-hours. Otherwise, the first figure in each term indicates lecture-hours and the second laboratory hours.

#### A.—Basic Program Leading to the Degree of Bachelor of Science in Nursing.

##### First Year:

Chemistry 250  
 English 210 or English 200  
 Nursing Education 231  
 Physical Education  
 Psychology 212 or Psychology 202  
 Zoology 220  
 Sociology 202

##### Second, Third and Fourth Years

Instruction and clinical practice are offered at the School of Nursing, University of Alberta Hospital, Edmonton.

##### Fifth Year

Students will be required to make a choice of a major field of interest **either** Public Health Nursing **or** Teaching and Supervision in Schools of Nursing.

#### I—Public Health Nursing

1. Course and Number	Subject:	Hrs. per wk.
P.H. 401	Health Seminar	(0-0; 2-0)
P.H. 403	Introduction to Social Work	(2-2; 0-0)
N.Ed. 450	Principles of Teaching Nursing and Health	(3-2; 0-2)
N.Ed. 451	Current Trends in Nursing	(0-0; 2-0)
Soc. 202	Sociology	(3-0; 3-0)
Approved Senior		
Options	Sociology, Psychology, or Educational Psychology	(3-0; 3-0)
P.H. 400	Public Health Nursing	(3-0; 3-2s)
P.H. 405	Maternal Health	(2-0; 0-0)
P.H. 407	Child Health	(0-0; 3-0)
P.H. 402	Epidemiology	(2-0; 1-0)
	Introduction to Hospital Nursing Service	
N.Ed. 459	Administration	(2-0; 0-0)

#### 2. Field Experience

Observation and supervised experience in public health nursing is required as part of the course. This is arranged to meet the individual needs of the students:

1. Concurrent field experience is included in a number of courses. Students spend *one half day* per week during the first term and *one and one-half*



days per week during the second term observing and teaching in local health and social agencies.

2. Four weeks of full time field experience in selected health agencies following final examinations.

## II—Teaching and Supervision

1. Course and Number	Subject:	Hrs. per wk.
P.H. 401	Health Seminar	(0-0; 2-0 )
P.H. 403	Introduction to Social Work	(2-2; 0-0 )
N.Ed. 450	Principles of Teaching Nursing and Health	(3-2; 0-2 )
N.Ed. 451	Current Trends in Nursing	(0-0; 2-0 )
Soc. 202	Sociology	(3-0; 3-0 )
Approved Option	Senior Psychology	(3-0; 3-0 )
N.Ed. 453	Hospital Nursing Service	(6-0; 0-0 )
N.Ed. 455	Administration in Schools of Nursing	(0-0; 5-0 )
N.Ed. 457	Curriculum Planning	(0-0; 2-5s)
PH. 409	Public Health Nursing	(2-0; 0-0 )

### 2. Field Experience

1. Concurrent field experience is included in a number of courses. Students spend *one half day* each week during the first term in observing in local health agencies. Observation and supervised practice in teaching, *one and one-half days* each week during the second term.
2. Four weeks of observation and supervised experience planned to meet the individual needs of each student following the final examinations.

## B.—Post-Basic Program Leading to the Degree of Bachelor of Science in Nursing.

### First Year

Chemistry 250.  
 English 210 or English 200.  
 Physical Education.  
 Psychology 212 or Psychology 202.  
 Zoology 220.  
 An approved Junior option from Divisions A, B, or C.

### Second Year

This is the same as the fifth year of the basic program.

## C.—Program Leading to the Diploma in Public Health Nursing.

Public Health Nursing, Fifth Year of the Basic Program, modified as follows:

1. N.Ed. 459 is replaced by Bact. 441. Bacteriology (1-3; 0-0)
2. Jr. Psychology course (3-0; 0-0)
3. For students who do not have adequate clinical experience in Psychiatry, an added two weeks of experience at the Provincial Mental Hospital may be arranged.

## D.—Program Leading to the Diploma in Teaching and Supervision in Schools of Nursing.

Teaching and Supervision, Fifth Year of the Basic Program, modified as follows:

1. P.H. 409 is replaced by Bact. 441. Bacteriology (1-3; 0-0)
2. Jr. Psychology Course (3-0; 3-0)

3. For students who do not have adequate clinical experience in Psychiatry, an added two weeks of experience at the Provincial Mental Hospital may be arranged.

### **E.—Program Leading to the Certificate in Advanced Practical Obstetrics.**

Two courses in Advanced Practical Obstetrics will be conducted during the year:

August 29 to January 14.

February 6 to June 24.

		Hrs. per wk. (10 weeks)
1. Subjects:		
Principles of Obstetrics and Mechanisms of Labour .....	A.O. 35 .....	3-0
The Care of the Obstetrical Patient .....	A.O. 35A .....	12-3c
Infant Care .....	A.O. 35B .....	1-0
Principles of Supervision and Teaching in Obstetrical Nursing .....	A.O. 35C .....	2-0

#### **2. Clinical Experience:**

1. Concurrent supervised experience in the antepartum and postpartum care of patients and in the care of the normal premature infant. Fifteen hours each week during part one of the course.
2. Eight weeks observation and supervised clinical experience in selected obstetrical units throughout the province. Each student must deliver, under medical supervision, a minimum of twenty cases during part two of the course.
3. On satisfactory completion of the clinical experience the student returns for two weeks to the University where the course is summarized, case reports reviewed, and a written and oral examination conducted. This constitutes part three of the course.

### **(5) DETAILS OF COURSES**

#### **NURSING**

##### **N.Ed. 231 Orientation to Nursing**

(2-0; 0-0)

A series of discussions designed to give the beginning student a general concept of the field of nursing and the responsibilities and obligations of the individual who chooses this profession.

Descriptions of the other courses of the first year of the Bachelor of Science in Nursing program offered at Calgary may be found under the section "Details of Courses" in the Faculty of Arts and Science.

# *I—The School of Physical Education*

## **INTRODUCTION**

The School of Physical Education was organized under General Faculty Council in 1954. The degree course in Physical Education has been offered since 1950. The program originally led to the degree of Bachelor of Education in Physical Education, which has been superseded by the degree of Bachelor of Physical Education.

In addition to the three-year course leading to the degree of Bachelor of Physical Education, the School provides instruction in teaching methods in both health and physical education for students in the faculty of Education, conducts regular classes (required) for first-year students in all faculties, organizes and supervises an intramural program and acts in an advisory capacity for the inter-collegiate athletic program.

The first year of the course is offered both at Edmonton and at Calgary.

Students may undertake graduate study in physical education leading to the degree of Master of Science. The Calendar of the Faculty of Graduate Studies should be consulted.

## **Opportunities in Physical Education**

Graduates with a degree in physical education are being employed in both the fields of recreation and physical education. The demand for qualified people in these fields continues to increase each year, far exceeding the supply.

## **Teacher Education**

The School of Physical Education is responsible for courses in health and physical education offered to students in the Faculty of Education.

All first-year students registered in the Faculty of Education, with the exception of those majoring or minoring in physical education are required to enroll in: Phys. Ed. 200 or 201 or 203 Physical Education.

Students in the B.Ed. (Elementary) are required to enroll also in Phys. Ed. 295 Health Education.

**Dress:** The prescribed gymnasium costume is:

### **Women**

Shorts (red)  
Sports blouse (white)  
Socks (white)  
Running shoes

### **Men**

Shorts  
T-shirts  
Socks (white)  
Running shoes

## **The Service Program**

It is the aim of the School of Physical Education to make a major contribution toward the physical, mental and social life of each student through instruction and participation in physical and recreational activities.

All first-year students are required to take two hours of physical education each week. Those excepted from this regulation are:

1. Students declared physically unfit by the University Medical Services.
  2. Students over 25 years of age.
- Individual lockers, towels and shower facilities are available for all students. The program is conducted in the University Gymnasium.

**Dress:** The required gymnasium costume is identical to the one outlined in the foregoing section, "Teacher Education."

### **The Intramural Program**

The School of Physical Education, with the co-operation of the University Athletic Board, organizes and administers a comprehensive program of intramural sports. A primary purpose of the program is to encourage sportsmanship and friendly relations among the students of the University through athletic competition. Individual and group competitive sports for men and women include golf, cross-country running, basketball, hockey, volleyball, touch football, table tennis, curling, swimming, skiing, badminton and bowling.

### **Intercollegiate Athletics**

Included in the activities for men are football, cross-country, golf, tennis, badminton, volleyball, basketball, hockey, skiing and curling. Women compete in basketball, volleyball, badminton, skiing, bowling and curling.

### **Matriculation Requirements for the Degree Course**

A high school diploma with "B" or higher standing and at least a 60% average in the following Grade XII courses:

- (a) English 30,
- (b) Social Studies 30,
- (c) Chemistry 30,
- (d) Three of: French 30, German 30, Latin 30, Physics 30, Biology 32, Mathematics 30.

Note: It is recommended that students planning to register in physical education elect to take Biology 32 as one of the three optional courses.

These general regulations notwithstanding, the University may in its discretion refuse admission to any applicant.

### **Programs Offered in the School of Physical Education**

- (1) The Degree of Bachelor of Physical Education (first-year only offered in Calgary).

#### **First Year**

1. Chemistry 250.
2. English 200 or 210 or 230.
3. Psychology 202 or 212.
4. Zoology 220.
5. Physical Education 243: Introduction to Physical Education.
6. Physical Education 205: Activity Course.
7. Physical Education 207: Activity Course.
8. Physical Education 211: Activity Course.
9. Physical Education 215: Activity Course.

#### **Second Year**

1. Physiology 361.
2. Physical Education 305: Activity Course.
3. Physical Education 307: Activity Course.
4. Physical Education 311: Activity Course.
5. Physical Education 315: Activity Course.
6. Physical Education 362: Human Anatomy and Kinesiology.

7. Physical Education 371: First Aid and Care of Athletic Injuries.
8. Physical Education 375: Tests and Measurements in Health and Physical Education.
9. Physical Education. 389. Outdoor School.
10. Physical Education 392: School Health Education.
11. Two approved options from Division A, B, or C.\*

**NOTE:**

\*Division A subjects: Languages and Fine Arts.

Division B subjects: History and Political Economy.

Division C subjects: Science and Mathematics.

**Third Year**

1. Physical Education 401: Activity Course.
2. Physical Education 403: Activity Course.
3. Physical Education 405: Activity Course.
4. Physical Education 407: Activity Course.
5. Physical Education 442: Organization and Administration of Health and Physical Education.
6. Physical Education 452: Community Recreation.
7. Physical Education 467: Prevention and Corrective Physical Education.
8. Physical Education 473: Physiology of Exercise.
9. Physical Education 482: Observation and Practice in Field Work.
10. Two approved options from Division A, B, or C.

**Graduation Requirements**

1. Two "seconds" to be secured in Physical Education 362, 392, 442, 452, or in each member of any pair from Physical Education 371, 375, 467, 473.
2. Two "seconds" to be secured in the Arts and Sciences courses of the second and third year.

**(2) Teacher Education****The Major and Minor in Physical Education****MAJOR**

1. P.E. 205, 207, 243, 305.
2. P.E. 211, 401, 392.
3. P.E. 215, 307, 311, 403
4. P.E. 405, 407, 442.

**MINOR**

1. P.E. 205, 207, 243, 305.
2. P.E. 211, 401.
3. P.E. 215, 307, 311, 403.
4. P.E. 405, 407.

**The Minor in Health Education****MINOR**

1. P.E. 392 (Health Education).
2. Education 310
3. P.E. 492 (Health Education).

**B.Ed. Students in the Elementary Route**

Physical Education 200—Physical Education in the Elementary Grades.  
Physical Education 295—School Health Education.

**(3) Faculty of Education Students in the Junior Elementary (E) Program**

Physical Education 203—Physical Education for Grades I to IX.  
Physical Education 295—School Health Education.

**DETAILS OF COURSES OFFERED IN CALGARY**

Note: In the case of courses which are given throughout the winter session, the weekly hours of instruction are set out for both terms. The first figure in each term indicates lecture-hours and the second laboratory-hours. Even numbered courses are full courses; odd numbered courses are half courses.

**Staff:—**

**Professor**—L. Goodwin.

**Assistant Professors**—J. Dewar, Mary P. Hendrickson\*, D. deF. Macintosh.

**Lecturer**—R. D. Bratton.

**Instructors**—Shirley A. Duquette, Pat Power.

**Sessional Instructor**—Mrs. E. Kueber.

**200. Physical Education in the Elementary Year** (1-2; 1-2)

Mrs. E. Kueber

The theory, practice and teaching of physical education in the primary and elementary grades. Activities will include games of low organization, story plays, simple team games, folk dancing, rhythmic, self-testing stunts, tumbling and pyramid building.

**205. Activity Course**—R. D. Bratton (0-3; 0-0)

Theory, practice, and teaching of soccer and volleyball.

**207. Activity Course**—Mrs. E. Kueber (0-0; 0-3)

Theory, practice, and teaching of games of low organization and rhythmic.

**211. (M) Activity Course**—R. D. Bratton (0-0; 0-3)

Theory, practice, and teaching of tumbling and apparatus for men.

**211. (W) Activity Course**—P. Powers (0-0; 0-3)

Theory, practice, and teaching of tumbling and apparatus for women.

**215. Activity Course**—J. Dewar (0-0; 0-3)

Theory, practice and teaching of aquatics with emphasis on fundamental skills and stroke techniques.

**218. (M) Recreational Activities** (0-2; 0-2)

Physical Education Staff

Emphasis on the fundamental skills in the following recreational activities: volleyball, basketball, tumbling, badminton, conditioning exercises and body mechanics.

Course required of all first-year men not enrolled in the Faculty of Education.

**228. (W) Recreational Activities** (0-2; 0-2)

Physical Education Staff

Emphasis on the fundamental skills in the following recreational activities: volleyball, badminton, dancing, tennis and body mechanics.

Course required of all first-year women not enrolled in the Faculty of Education.

**243. Introduction to Physical Education**—L. Goodwin (3-0; 0-0)

A survey of the field of physical education, with emphasis on factual information directed toward the development of a scientific program of physical education. This course will include a brief history of physical education as well as underlying philosophies.



- 305. (M) Activity Course—J. Dewar** (0-0; 0-3)  
Theory, practice, teaching and coaching of basketball for men.
- 305. (W) Activity Course—P. Powers** (0-0; 0-3)  
Theory, practice, teaching and coaching of basketball for women.
- 307. Activity Course—Mrs. E. Kueber** (0-3; 0-0)  
Theory practice and teaching of folk and socail dance.
- 311. Activity Course—** (0-0; 0-3)  
Miss P. Power (W.), B. Bratton (M.)  
Theory, practice and teaching of tumbling and appartus. Emphasis on class organization and teaching methods.
- 392. Health Education in Secondary Schools—Mrs. E. Kueber** (3-0; 3-0)  
Personal and environmental school health with special emphasis on methods and materials in health instruction.
- 401. Activity Course—Miss P. Power** (0-3; 0-0)  
Theory, practice and teaching of track and field with emphasis on coaching techniques, organization and officiating of meets.
- 403. Activity Course** (0-0; 0-3)  
Theory, practice and teaching of badminton, curling and skiing.
- 405. Activity Course** (0-0; 0-3)  
Theory, practice, teaching and coaching of hockey and wrestling.
- 407. Activity Course—D. Macintosh** (0-3; 0-0)  
Theory, practice, teaching and coaching of football.
- 442. Organization and Administration of Health and Physical Education** (3-0; 3-0)  
L. Goodwin  
An analysis of factors involved in planning, directing, staffing, co-ordinating, budgeting, and reporting with respect to comprehensive junior and senior high school programs in health instruction, the required program, intramural sports, and interscholastic athletics.  
Prerequisite: Physical Education 243.

## *J—The Faculty Of Graduate Studies*

Facilities exist at Calgary for work in certain fields of study. Enquiries should be directed to the Dean, Faculty of Graduate Studies, University of Alberta, Edmonton, Alberta.

# 12—Awards and Financial Assistance

## GENERAL INFORMATION

This Calendar includes all undergraduate awards which are open either to students at both Calgary and Edmonton or to students at Calgary only. Awards which are restricted to students at Edmonton are not listed.

For a complete list of all awards, including Graduate awards, refer to the University Awards Calendar or the Composite Calendar.

Students of high ability or those who require financial assistance are urged to read carefully the sections of interest to them.

Application forms may be had from the Student Awards Office, Edmonton, or from the Student Counselling Services Office, Calgary. Unless otherwise stated completed applications must be received by the Student Awards Office, Edmonton, by dates as follows:

Matriculants	— August 1
Undergraduates	— June 15
Graduates	— March 1

Where no application information is shown, the award is made automatically without applications.

For special information regarding application for Province of Alberta Assistance see the section with that heading.

Publication of Awards is as follows:

Graduating or Graduate Students	— Spring Convocations
Undergraduate (automatic awards)	— First week of June
Undergraduate (awards applied for)	— First week of July
Matriculant (and Undergraduate of Aug. 1 date)	— First week of Sept.

In order that awards may be equitably distributed, no student may hold more than one major award in any one year.

All monetary awards except certain cash prizes are contingent upon the student proceeding with his university course and are payable only when the student is in actual attendance at the University. Payment of fees is a first charge against such awards.

The University assumes liability for the payment of fellowships, scholarships, bursaries, prizes and other awards only to the extent that gifts from donors, or returns from particular investments for these purposes, will permit.

For further information inquiry should be made to:

Mr. R. B. Wishart,  
Administrator of Student Awards,  
Student Awards Office,  
University of Alberta,  
Edmonton, Alberta.

or Student Counselling Services Office,  
University of Alberta, Calgary,  
Calgary, Alberta.

As this calendar is published a considerable time before the opening of the Session, the University reserves the right to make whatever changes circumstances may require, including cancellation of particular awards.

## MATRICULATION AWARDS

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These awards are tenable at the University of Alberta in Edmonton or Calgary. There are a few which are tenable at a Junior College affiliated with the University.

Awards by the University of Alberta and the Province of Alberta are listed first. The remainder are listed alphabetically.

**University of Alberta Honor Prizes**—The Board of Governors of the University offers annually a prize to the value of \$50.00 to each student from Alberta high schools entering a degree or diploma course in the University with an average standing in the examination units of matriculation of at least 85%.

**University of Alberta Matriculation Scholarships.** The University of Alberta offers annually three scholarships of the value of three years' fees in any Faculty at the University of Alberta to matriculating students, from Alberta High Schools, other than those eligible for a Tegler or a Bennett matriculation scholarship.

The scholarships will be awarded to the three students having the highest average standing in the examinations covering the subjects for complete senior matriculation (Grade XII) as prescribed in the course of studies. To be eligible for one of these scholarships a student must have completed the grades from ten to twelve inclusive, in not more than four years, and secured an average mark of at least 80% in all subjects considered as the bases of award.

Any student holding one of these scholarships must make at least second class standing in order to be eligible for the scholarship during the succeeding year.

Application should be made by August 1.

**University of Alberta War Memorial Scholarships**—The War Memorial Fund of the University of Alberta will provide one or more scholarships of \$650.00 to be awarded for study in a degree program at the University of Alberta on the basis of scholastic ability and financial need and according to the following priorities: (1) to a son or daughter of a member of the armed forces or merchant navy who lost his or her life during, or as a direct result of, hostilities in the War of 1939-45; or (2) to the son or daughter of a member of the said forces or merchant marine who was seriously incapacitated either physically or mentally; or (3) to the son or daughter of any man or woman who served in any of Her Majesty's or Allied forces during 1939-45. Failing the receipt of applications from the above-mentioned groups, consideration will be given to applications from (4) sons or daughters of native or naturalized Canadians domiciled in Alberta.

This scholarship is available to matriculants or undergraduates.

Applications should be made by August 1.

**Province of Alberta Matriculation Scholarships (The Queen Elizabeth Education Scholarship Fund)**—The Province of Alberta, under the students Assistance Act, has made possible the establishment of three hundred matriculation scholarships of \$100 each to bona fide residents of Alberta. The basis of award is academic attainment provided that the average mark of senior matriculation shall be at least 75%. The scholarships are tenable in the first year at the University of Alberta or in a course of university level at a Junior College affiliated with the University. They are also tenable at an approved college or university when the course being taken is of university level and is not available at the University of Alberta.

The amount of the scholarship may be increased according to the financial need of the student, to a maximum which may in some cases be as high as \$1,250. Application may be made for the basic \$100 without evidence of financial need. If the application is for more than \$100, the form must be filled in completely in order to indicate the amount of financial need.

Apply as soon as possible after August 1. Applications received after August 30 will be considered in order of receipt. Application must be made on the Provincial Government form.

**The Alberta Hotel Association Scholarships.** Forty-three scholarships of \$500.00 each and 10 of \$250.00 each are offered to matriculants from Alberta High Schools entering the University of Alberta in Edmonton or Calgary or in a course of University level at a Junior College affiliated with the University of Alberta. The scholarships of \$250.00 are intended for students who can secure their desired course without leaving their home city. The basis of award is academic standing in Grade XII and of financial need.

Application forms may be secured from The Alberta Hotel Association, Credit Foncier Bldg., 10275 Jasper Avenue, Edmonton, and should be completed and returned by August 6.

**The Alberta Institute of Agrologists Scholarship in First-Year Agriculture,** valued at \$250.00, will be awarded annually to an applicant from either an Alberta high school or a provincial school of agriculture on the basis of scholastic standing.

Applications should be made by August 1.

**The Alberta Wheat Pool Bursaries for Rural Students**—Two bursaries of \$500.00 a year are offered annually to two students from Alberta high schools, one to a student whose home is in the southern half of the province and one to a student whose home is in the northern half of the province. While applications will be considered from students registered in any undergraduate degree program, preference will be given to candidates entering the Faculty of Agriculture. The amount of \$500.00 will be paid to each recipient during each of the undergraduate years up to and including five years, provided that he or she maintains an average standing of not less than 65% in each year. These bursaries are open to students whose parents are engaged in farming and who derive their income mainly from farming. The award will be made on the basis of a satisfactory record in the Grade XII examinations for complete senior

matriculation, and of the need for financial assistance. In applying for one of these bursaries the Wheat Pool's field service personnel should be used for reference.

For the purposes of this award the southern half of the province shall be defined as that part of Alberta inclusive of and south of township 44.

Applications should be made by August 1.

**The Alberta Wheat Pool Scholarships** of the value of \$200.00 each are offered annually to three students of outstanding merit entering the first, second and third years of Household Economics at the University of Alberta. These scholarships are available to students who have been members of Girls' Garden Club projects.

Applications must be submitted to Mr. R. M. Putnam, Deputy Minister, Provincial Department of Agriculture, Edmonton, by August 1.

**The Viscount Bennett Scholarships**—The late Right Honorable Viscount Bennett, P.C., K.C., LL.D., D.C.L., of Calgary and Mickelham, founded a trust to support scholarships open to students who have resided for at least five consecutive years in Calgary, or within twenty miles of that city, or in Banff National Park.

Twelve scholarships of the value of \$300.00 each will be available for competitive award on the basis of academic attainments, provided always that candidates are, in the opinion of the Scholarship Committee of good character and possessed of satisfactory personal qualities.

The scholarships may be held in any year and course, but preference may be given to students who have successfully completed one or more years of university work. However, at least three of the scholarships are reserved for matriculants.

Applications from matriculants should be made by August 1.

**The William Asbury Buchanan Bursary**—The annual income of \$100.00 from a trust created by the will of the late Senator William Asbury Buchanan will be expended in paying part of the tuition of a student whose home is in the Lethbridge Public School District, the Lethbridge Separate School District or the Lethbridge School Division. Selection of a recipient of this bursary will be made on the basis of academic attainment, athletic ability, useful activity in student affairs, and financial need.

The award, which is open to a student in any faculty, is tenable at The Lethbridge Junior College or the University of Alberta for matriculants or undergraduates, and either at this or another university for graduate studies.

Applications should be made by August 1.

**The Calgary and District Retail Druggists' Association Scholarship** of the value of \$250.00 is offered to a student of outstanding merit entering first year Pharmacy. The award will be based on the standing in the required subjects of grade 12. The student must have carried out the work of grade 12 in that part of Alberta south of a line from Rocky Mountain House to Red Deer to Coronation, but not including those centres.

**The Calgary Men's Canadian Club Scholarship** of \$100.00 is awarded to a male student from a Calgary high school entering the University of Alberta, Calgary. The student shall have an average mark in the subjects of matriculation of not less than 75% and shall not have qualified for any other major award.

Apply to the Secretary, The Men's Canadian Club, Calgary by July 31.

**The Calgary Herald Scholarship in Chemical and Petroleum Engineering** is valued at \$1,000.00 (or \$1,100.00 in the event of the winner being a former Calgary Herald Carrier). This scholarship will be awarded, on the basis of the matriculation standing, to a student entering Chemical Engineering or Petroleum Engineering at the University of Alberta whose home is in that part of Alberta south of a line from Rocky Mountain House to Red Deer to Coronation, who matriculates from a school in that area. The award will be paid in instalments of \$300.00 (or \$400.00—see above), \$300.00, \$200.00, \$200.00 at the beginning of the four academic years, provided that the holder's average in the first, second and third years shall not fall below 75%.

Applications should be made by August 1.

**The Calgary Herald Scholarship in Classics.** A scholarship of \$500.00 is offered to a matriculant who proposes to enter the Honors Classics program at the University of Alberta, Calgary. This scholarship will be awarded on the basis of the matriculation examination in Latin. Additional consideration would be given to an applicant who has Greek 100.

In case no suitable candidate presents himself in any year the scholarship may be awarded on the results of the first year's work in Honors Classics at the University in Calgary.

Applications should be made by August 1.

**The Calgary Underwriters Association Bursary** of the value of \$150.00 is offered annually to a student of outstanding merit from a high school in the Calgary area, entering the first year of any program of study offered at the University of Alberta, Calgary. The financial need of the applicants will be considered.

Applications should be made by August 1.

**The Canadian Bechtel Limited Bursary in Engineering** valued at \$600.00 is awarded annually on the basis of evidence of financial need and of matriculation standing to a matriculant from an Alberta high school qualified for admission to the first year of Engineering. The bursary is tenable in the first year of Engineering at the University of Alberta.

Applications should be made by August 1.



**The Canadian Freightways Motor Transport Matriculation Bursary**—Canadian Freightways offers annually a matriculation bursary of \$400 to be awarded to an Alberta student entering first year in the Faculty of Commerce at the University of Alberta in Edmonton or Calgary.

The bursary will be awarded on the basis of evidence of financial need and of a satisfactory record in the Grade XII examinations.

Applications should be made by August 1.

**The Canadian Legion Scholarship, valued** at \$400.00 is offered by the Dominion Command of the Canadian Legion, B.E.S.L., for study in a degree program at the University of Alberta on the basis of scholastic ability and financial need, and according to the following priorities: (a) to a son or daughter of a member of the armed forces or merchant navy who lost his or her life during, or as a direct result of, hostilities in the War of 1939-45; or (b) to the son or daughter of a member of the said forces or merchant marine who was seriously incapacitated either physically or mentally; or (c) to the son or daughter of any man or woman who served in any of Her Majesty's or Allied forces during 1939-45. Failing the receipt of applications from the above-mentioned groups, consideration will be given to applications from (d) sons or daughters of native or naturalized Canadians domiciled in Alberta.

Preference will be given to matriculants or to students who have completed the first year at University.

Applications should be made by August 1.

**The Canadian-Marietta Customers Scholarship, valued** at \$250, is offered by the Canadian-Marietta Company to a student entering the first year at the University of Alberta in Chemistry, Chemical Engineering, or the Secondary B.Ed. Route provided he is majoring in Mathematics or Science.

The award will be made on the basis of the student's high-school record, financial need, and the extent of his participation in extra-curricular activities. Depending upon the holder's record during the first year, the company may decide to renew his scholarship.

Applications should be made by August 1.

#### **Canadian Mathematical Congress Scholarships in Mathematics.**

**The Friends of the Canadian Mathematical Congress Scholarships, one of** the value of \$500.00 and one of the value of \$350.00.

**The Haddin, Davis and Brown Limited Scholarship** of the value of \$250.00.

The above scholarships in mathematics will be awarded to students who have taken all of their Grade XII work at an Alberta high school, have obtained

satisfactory standing in this work (including Mathematics 30 and 31), and are entering the first year of a degree program at the University. The awards will be made primarily on the basis of special competitive examination in mathematics to be set and marked by the Department of Mathematics and to be written early in May.

The first Scholarship of the Friends of the Canadian Mathematical Congress is to be paid to the over-all winner in this competition.

These scholarships may go to students who register either at the University of Alberta or at other Canadian Universities. The successful candidates will not be required to pursue the study of mathematics, either at the University of Alberta or elsewhere.

Candidates for these scholarships should apply to their high school principals or directly to the Department of Mathematics, University of Alberta, Edmonton, for the necessary form of application, before April 1. The forms should be returned to the Department of Mathematics at the University before April 30.

**Canadian Society of Exploration Geophysicists Matriculation Scholarship in Education** of \$350.00 is offered annually to a male student entering the four year degree course in Education, Secondary Route, with a major in Mathematics or the Physical Sciences. The award will be made on the basis of high standing in Grade XII examinations in Mathematics, Physics and Chemistry.

Applications should be made by August 1.

**The Canadian Superior Bursary** is offered by Canadian Superior Oil Ltd., to a male Canadian citizen entering the first year of a course in geology or petroleum engineering. The bursary will cover tuition fees and textbooks for a four year period, provided a satisfactory standing is maintained, and may also include a subsistence allowance when unusual financial need is demonstrated.

The award will be made on the basis of academic standing in Grade XII and financial need. References as to character are required.

A change of program from that leading to a career in geology or petroleum engineering, or a failure to maintain an academic standing satisfactory to the Faculty, will entail forfeiture of the bursary.

Application should be made by August 1 of each year in which the bursary is to be held.

**The City of Calgary Matriculation Scholarships.** Seven scholarships of \$500.00 each are offered annually by the City of Calgary to Calgary matriculation students entering first year university in any faculty. The awards will be made on the basis of proficiency and financial need. The students will be given free choice in selection of university to be attended.

Written application setting forth the financial ability of the home and other pertinent information should be received by the City Clerk, Calgary, by August 1 on the forms available at the Office of the City Commissioner, Calgary.

**The City of Edmonton Matriculation Scholarships.** Two scholarships of the value of \$300.00 each are offered annually by the City of Edmonton to matriculating students entering first year at the University of Alberta. One of these will be restricted to a student who has attended an Edmonton School from Grade VII to Grade XII. The basis of award will be academic standing and financial need.

Written applications should be received by the City Clerk, Edmonton by June 15. Application forms are available at the office of the City Clerk or the City Comptroller, Edmonton.

**The City of Medicine Hat Scholarship**—a scholarship of \$500.00 will be offered annually by the City of Medicine Hat, on the basis of academic standing and financial need to a student, either male or female, who wishes to attend the University of Alberta. This scholarship will be available to a student matriculating into the University and is not restricted to any faculty. This student must have attended a Medicine Hat School from Grade VII to Grade XII. The student's parents must have resided in Medicine Hat during this period. The award will be payable in two instalments, the first applicable to fees at the time of registration, the second payable after the successful completion of the first term's work.

Written application should be received by the City Clerk, City Hall, Medicine Hat before August 1. Application forms, are available at the office of the City Clerk or the City Comptroller's office, City Hall, St. Theresa Academy and Medicine Hat High School.

**The Civil Service of Alberta Bursaries**—Up to ten bursaries of a maximum of \$500.00 a year are offered annually to first year University students from Alberta high schools. These students must be the children of provincial civil servants, retired provincial civil servants or deceased provincial civil servants. The bursaries are confined to matriculants and the amount of \$500.00 will be paid to each recipient who finds it necessary to live away from home while \$250.00 will be paid to each recipient who can attend the chosen course while living at home. These bursaries are tenable at the University of Alberta in Edmonton or Calgary or in a program of university level at a Junior College affiliated with the University. The awards will be made with due regard to geographic distribution. Some are tenable at the Institute of Technology and Art, Calgary.

Application forms may be obtained from the Executive Secretary, Civil Service Association of Alberta, Alberta Jasper Bldg., 9815 Jasper Ave., Edmonton, and should be completed and returned to him not later than July 31.

**Cominco Undergraduate Scholarships**—The Consolidated Mining and Smelting Company of Canada offers annually two four-year awards of \$1,400, payable at \$350 per annum, and four one-year awards of \$250, to matriculants who are sons, daughters or wards of (1) a Cominco employee; (2) a widow whose husband died while regularly employed by Cominco; or (3) a Cominco pensioner or his widow. Applicants must attain an average of at least 70% in the subjects of senior matriculation or the equivalent.

Applications are due May 15, and further information and applications forms

may be obtained from the Secretary, Scholarship Committee, The Consolidated Mining and Smelting Company of Canada Limited, Trail, British Columbia.

**The E.I.C. Wives Club of Calgary Scholarship** of \$100.00 is awarded to a deserving first year Engineering student of the University of Alberta, Calgary, with high entrance standing and who receives no other major award.

**Edmonton Civic Employee's Bursaries.** Up to seven bursaries of \$350.00 each are offered annually to matriculants entering the University of Alberta or to holders of High School Diplomas entering The Institute of Technology and Art, Calgary. The basis of award will be academic standing in Grade XII and financial need.

Applicants must be children of City of Edmonton Civic employees, deceased civic employees or retired civic employees.

Application forms may be obtained from The Executive Secretary, Edmonton Civic Employees' Welfare Chest Fund, Finance Department, City Hall, Edmonton and should be completed and returned to him by July 31.

**The Friends of the University Matriculation Bursaries** — The Friends of the University have provided two bursaries of \$150.00 each, open to students from high schools in Alberta other than those in the City of Edmonton, the City of Calgary or within twenty miles of that city, or in the Banff National Park. To be eligible for this bursary the student must have completed the grades from ten to twelve in not more than four years. The award will be made on the basis of a satisfactory record in the Grade XII examinations for complete senior matriculation and of the need for financial assistance.

Applications should be made by August 1.

**General Motors Scholarship**—Beginning with the autumn of 1955, General Motors of Canada Limited will offer annually one matriculation scholarship to an outstanding student who is entering any course at the University of Alberta. The scholarship may be renewed up to a maximum of four years, providing the recipient maintains a high standard of scholarship (at least 75%). Should the student's scholarship fall below the desired standard the award may be transferred to another qualified candidate who is a member of the same class.

The size of the award will be determined by the recipient's financial need, and may vary from \$200.00 to \$2,000.00 per year. A grant-in-aid of \$500.00 for each scholarship will be paid to the University.

The award is open to any young man or young woman who is a citizen of Canada. The basis of award will be high scholastic standing, personal qualities and financial need. A General Motors Scholar may not hold any other major award.

Applications should be made by August 1.

**The C. O. Hicks Matriculation Scholarship** of \$200.00 presented by alumni and teachers, past and present, of Victoria Composite High School will be awarded to a matriculating student who, in addition to academic merit has shown qualities of good citizenship. This award will be made annually to a student who has attended Victoria Composite High School for at least two years, including the graduating year. One hundred dollars will be given at the beginning of the first year at the University, and one hundred dollars at the beginning of the second year, if the student has satisfactorily completed the first year.

Applications should be made by letter to Mr. H. A. McFarland, Principal of Victoria Composite High School, by September 1 of any year. The applicant must provide proof of academic standing and of admission to the University.

**The Imperial Order Daughters of the Empire Matriculation Bursaries** — The Provincial Chapter of Alberta, Imperial Order Daughters of the Empire, has provided four bursaries for matriculating students, known as the Coronation Bursaries, of the value of \$750.00 each. These are tenable at the University of Alberta and are each made in three yearly payments. Two of the bursaries are reserved for children of men or women who served overseas with the British forces during the Great Wars. All candidates must have resided in the province of Alberta for at least three years prior to application and must not be more than nineteen years of age as at September 1 of the year the award is made. The provincial educational secretary of the Imperial Orders Daughters of the Empire will notify the high schools in February of each year, of the impending award, all applications to be in her possession by June 1. Further information and application blanks may be obtained from Mrs. C. B. Linton, 11418-101 St., Edmonton, Alberta.

**The Imperial Order Daughters of the Empire Second War Memorial Matriculation Bursaries** — A number of bursaries for matriculating students are offered annually by the Imperial Order Daughters of the Empire as part of the 1939-45 War Memorial. They are tenable at any University in Canada. At least one bursary will be awarded in each Province and one in the Yukon, provided there are suitable candidates. The awards are of the value of \$1,600.00, i.e. \$400.00 a year for four years: \$500.00 each in the first and second years and \$600.00 in the third of a three year course; \$350.00 in the first, \$300.00 in the second, third and fourth years and \$350.00 in the fifth year of a five year course. The continuation of the award is subject to the holder's passing the examinations of each year and satisfying the Provincial Committee of Selection of his or her continued fitness to retain the Bursary.

An application, which must be submitted not later than April 1, must include certified evidence to the fact that the candidate is the son or daughter of a deceased or permanently and seriously disabled member of the Services of the Second

World War. Consideration will also be given to the applicant's general record and standing in school, physical fitness and circumstances of the family.

Further information and application blanks may be obtained from the provincial educational secretary, Mrs. C. B. Linton, 11418 - 101 St., Edmonton, Alberta.

**The Imperial Order Daughters of the Empire Lethbridge Municipal Chapter Bursary** of the value of \$500.00 is offered annually to a matriculant in memory of the veterans of both World Wars. This bursary is tenable at the University of Alberta or at Lethbridge Junior College and is payable over a period of three years: \$200.00 the first year, \$150.00 each year for the second and third years. The bursary is open to application from children of men or women who served with the Canadian or British Armed Forces during either the First or Second World Wars, and who have attended a Lethbridge High School for at least two years prior to making application. The Lethbridge Municipal Education Secretary will notify the High Schools in October of each year of the impending award, all applications to be in her possession by May 1. Further information and application blanks may be obtained from Mrs. Owen Williams, Municipal Education Secretary, Lethbridge Municipal Chapter, I.O.D.E., 532-15 St., South, Lethbridge, Alberta.

**The Interfraternity Council Scholarship** of the value of approximately \$400.00 is offered annually by the University of Alberta Interfraternity Council to a matriculant of outstanding merit entering the first year of any degree or diploma program at the University of Alberta, Edmonton. The money is provided from the proceeds of the annual Interfaculty Songfest. The extra-curricular activities of the student during high school will be considered in making this award.

**The L. T. Melton Real Estate Limited Scholarship** of the value of \$350.00 will be offered annually to a student with high scholastic standing from an Alberta High School who is entering first year Faculty of Commerce, University of Alberta.

Applications should be made by August 1.

**The Nickle Foundation Scholarship in Mathematics**, of the value of \$400.00 will be awarded to a student completing Grade XII at an Alberta high school and intending to enter a degree program at the University of Alberta. The student must: (a) reside normally in Southern Alberta (south of the northern limits of Red Deer); (b) obtain matriculation standing in the work of Grade XII, including Mathematics 30 and 31; (c) obtain high ranking in a special mathematics examination set and marked by the University and written early in May.

Candidates for this scholarship should apply to their high school principals or directly to the Department of Mathematics, University of Alberta, Edmonton, for the necessary form of application before April 1. The forms should be returned to the Department of Mathematics at the University before April 30.

**The Nickle Foundation Matriculation Scholarship** of \$1,000.00 is offered annually to a Grade XII student, from any Metropolitan Calgary High School, enter-



ing any Canadian university within two years of receiving this award. Those eligible will be the recipients of the Nickle Foundaton Grade Eleven Deferred Bursaries in the previous year and their alternates. Selection will be made by the Nickle Foundation Selection Committee.

The scholarship will be paid in four annual instalments of \$250.00 provided the student maintains a satisfactory academic level.

**The North Calgary Business and Professional Women's Club Bursary** of \$50.00 is offered to a woman student entering the first year of the Bachelor of Education program at the University of Alberta, Calgary. She must be under 21 years of age (at date of registration), have taken Grade XII in a Calgary High School north of the Bow River and have an average in Grade XII of at least 70%. The financial need of the student will be considered in making the award.

Applications should be made by August 1.

**Petrofina Group Western Canada Scholarships**—Three scholarships,

**The Calvan Consolidated Scholarship**

**The Canadian Fina Oil Scholarship**

**The Western Leaseholds Scholarship**

will be offered, not necessarily annually, of the value of \$700 each per annum for a period up to and including four academic years or to graduation (whichever is the lesser). Continuation of the scholarship will be subject to the maintenance of an academic standing satisfactory to the Faculty concerned. The university will receive an unrestricted grant-in-aid of \$250 per year for each scholarship winner in attendance.

Eligibility will be limited to the following with priority being given to categories (a) and (b):

- (a) Children or wards of employees or of annuitants, or of deceased employees who died while in Company service—awards may be made in courses leading to an undergraduate degree at any recognized university;
- (b) Company employees—awards will be made only for courses related to the oil industry and leading to an undergraduate degree in any recognized university;
- (c) Senior matriculants from high schools of Alberta or Saskatchewan—awards will be made only for courses in geology, petroleum engineering, chemical engineering or geophysics, and leading to an undergraduate degree at the University of Alberta or the University of Saskatchewan.
- (d) Undergraduates—consideration may be given for worthy undergraduate students who have already completed one or more years in one of the courses and universities detailed in (c).

The bases of award, except under (d), will be 70% in the final high school examinations, evidence of financial need, general character and personal qualities.

The Company will give careful consideration to the provisions of summer employment at going rates for scholarship holders.

Application forms under (a) and (b) may be secured from the Secretary, Petrofina Group Western Canada Scholarship Committee, Room 322, Bamlett Bldg., Calgary, Alberta, and should be completed and returned not later than July 1.

Applications under (c) and (d) should be made to the Student Counselling Service, University of Alberta, Calgary, by August 1.

#### **The Renkenberger Scholarship—See Undergraduate Awards**

**St. Hilda's Scholarships—**The St. Hilda's Trust Fund will provide annually two matriculation scholarships of \$300.00 each for women students entering the Faculty of Arts and Science, University of Alberta, Calgary, and one leaving scholarship of \$400.00 for a woman student of outstanding merit in the same faculty who will continue her education at another approved institution.

Preference will be given to any applicant who is a graduate of St. Hilda's School for Girls, or a descendant of any such graduate, or of a graduate of St. Hilda's College. If no suitable candidate applies in this category, applications will be considered from women students from any Alberta high school who are entering or leaving the Faculty of Arts and Science, Calgary.

Applications for the matriculation scholarships should be made before August 1.

Applications for the leaving scholarship should be made by June 15.

**The Robert David Sinclair Scholarship in First-Year Agriculture —** A scholarship of \$150.00 in memory of Robert David Sinclair, late Dean of the Faculty of Agriculture, is offered by his family to a student entering first year in the Faculty of Agriculture.

The scholarship is open to students from schools of agriculture and high schools in Alberta and will be awarded on the basis of scholastic standing.

Applications should be made by August 1.

**The Society of Exploration Geophysicists Scholarships—**The Society offers annually four scholarships of \$500.00 each to Canadians majoring in Geophysics at Universities in Canada. The award will be based on academic record and financial need. Applicants may be matriculants entering first year University or undergraduates or graduate students.

Application forms may be secured from Canadian Society of Exploration Geophysicists Scholarship Sub-committee, P.O. Box 117, Calgary, Alberta, and should be returned completed to the same address by March 15.

**The Steel Company of Canada Bursary** of \$500 per annum is offered annually to a student entering first year at the University of Alberta, in any degree or

diploma course. The bursary will be renewed each year for four years or until the student has completed his or her course whichever is less, provided a satisfactory academic standing is maintained. The financial need of applicants is to be considered. Applicants must be permanent Canadian residents. In addition a grant-in-aid of \$500 per annum in respect of each bursary will be paid to the University.

Applications should be made by August 1.

**The Robert Tegler Matriculation Scholarships**—The Robert Tegler Trust has provided three matriculation scholarships which are awarded annually to the three matriculating students, from the high schools in the city of Edmonton, having the highest average standing in the regular examinations covering the subjects for complete matriculation (Grade XII). To be eligible for one of these scholarships a student must be a British subject and have completed the grades from ten to twelve inclusive in not more than four years, with an average mark of at least 80% in all subjects considered as the bases of award. He must also have carried out the work of these three grades in the Province of Alberta and at least the Grade XII work in an Edmonton high school.

The scholarships provide for three full year's fees in any faculty at the University of Alberta. Any student holding one of these scholarships must make at least second-class standing in order to be eligible for the scholarship during the succeeding year.

Applications should be made by August 1.

**The Robert Tegler Special Scholarships**—The Robert Tegler Trust has provided two special scholarships for handicapped students, tenable in any faculty to which the students can be admitted, and available to new students or continuing undergraduates. While due weight will be given to the academic record of candidates, special consideration will be given to their background, financial need, nature of handicap, personal qualities, and other relevant points.

The scholarships may be awarded to the same students a second time, or even throughout the whole undergraduate course if, in the judgment of the committee, progress and other circumstances are such as fully to warrant it.

The value of each scholarship will be equal to the annual fees in the faculty concerned, plus a subsistence allowance of \$300.00 for the academic year.

Applications should be made by August 1.

**The University Women's Club of Edmonton Scholarship** of \$300.00 is awarded annually to a woman student of outstanding merit registered in a degree program at the University of Alberta. It may be held concurrently with any other award or awards and will be given to the woman student with the highest average standing (at least 85%) in the June matriculation examinations (Grade XII) in Alberta who

by accepting it will not forfeit any other award (or portion thereof) of an equal or greater value than this scholarship.

Application should be made by August 1.

**The Union Carbide Scholarship** having a maximum value of \$2,500.00 is offered annually to a male matriculant who will be entering the Faculties of Commerce or Engineering or the Physical Sciences of the Faculty of Arts and Science (i.e. B.Sc. programs in Chemistry, Geography, Geology, Mathematics or Physics) and who intends, after graduation, to enter business, industry or education. The amount will be payable \$700.00 during the first year and \$600.00 in each subsequent year. The student must maintain an average of at least 65% to continue to be eligible. The student should not be in receipt of other monetary scholarships exceeding \$200.00 in any one year. The award will be made on the basis of a satisfactory High School standing but financial need will also be considered.

Application should be made by August 1.

**The Hon. W. C. Woodward Scholarship** of \$500.00 per year is offered annually in competition to sons, daughters and legal dependents of full-time employees, or retired employees, and of employees who died while in the service of Woodward Stores (Edmonton) Limited. It is open to matriculants entering any degree course at the University of Alberta. The bases of award will be scholastic standing in the required subjects of senior matriculation in Alberta or equivalent standing as accepted by the University of Alberta, activity and interest in youth organizations, and outstanding qualities of citizenship, leadership and service.

The scholarships will be renewable each year up to a maximum of five years of undergraduate study, provided that the holder's academic standing and general conduct are satisfactory to the University.

Application forms are available from the Personnel Department of any Woodward Department Store and should be completed and returned to the same Department by July 15.

**The Calgary Highlander's Association Ladies' Auxiliary, Bursary** of \$100.00 will be awarded in 1962 to a student commencing studies at the University in Calgary. Applicants must be a son or daughter of a past or present serving Calgary Highlander, or a member of the Calgary Highlanders Cadets.

## UNDERGRADUATE AWARDS — GENERAL

**The following prizes, scholarships and bursaries are available to students in any faculty of the University:**

**University of Alberta Honor Prizes**—The Board of Governors of the University offers annually a prize to the value of \$50.00 to each undergraduate student in a degree or diploma program, who, in the work of the preceding year at the University

of Alberta, or at a Junior College affiliated with the University, obtained an average standing of at least 85%. This includes students in the graduating year who return to the University for further studies.

**University of Alberta First Class Standing Prizes**—The Board of Governors of the University offers annually a prize to the value of \$25.00 to each undergraduate student in a degree or diploma program, who, in the work of the preceding year at the University of Alberta, or at a Junior College affiliated with the University, obtained an average standing from 80% to 85%. This includes students in the graduating year who return to the University for further studies.

**Province of Alberta Undergraduate Scholarships (The Queen Elizabeth Education Scholarship Fund)**—The Province of Alberta, under the Students Assistance Act, has made possible the establishment of three hundred undergraduate scholarships of \$100 each to bona fide residents of Alberta. The basis of award is academic attainment provided that the average mark of the previous year shall be at least 75%. The scholarships are tenable at the University of Alberta. They are also tenable at an approved college or university when the course being taken is of university level and is not available at the University of Alberta.

The amount of the scholarship may be increased according to the financial need of the student, to a maximum which may in some cases be as high as \$1,250. Application may be made for the basic \$100 without evidence of financial need. If the application is for more than \$100, the form must be filled in completely in order to indicate the amount of financial need.

Apply by or before June 30. Applications received after June 30 will be considered in order of receipt. Application must be made on the Provincial Government form.

**University of Alberta War Memorial Scholarships**—The War Memorial Fund of the University of Alberta will provide one or more scholarships of \$650.00 to be awarded for study in a degree program at the University of Alberta on the basis of scholastic ability and financial need and according to the following priorities: (1) to a son or daughter of a member of the armed forces or merchant navy who lost his or her life during, or as a direct result of, hostilities in the War of 1939-45; or (2) to the son or daughter of a member of the said forces or merchant marine who was seriously incapacitated either physically or mentally; or (3) to the son or daughter of any man or woman who served in any of Her Majesty's or Allied forces during 1939-45. Failing the receipt of applications from the above-mentioned groups, consideration will be given to applications from (4) sons or daughters of native or naturalized Canadians domiciled in Alberta.

This scholarship is available to matriculants or undergraduates.

Apply by August 1.

**The Royal Canadian Legion Scholarship, valued** at \$400.00 is offered by the Dominion Command of the Royal Canadian Legion, B.E.S.L., for study in a degree program at the University of Alberta on the basis of scholastic ability and financial need, and according to the following priorities: (a) to a son or daughter of a member of the armed forces or merchant navy who lost his or her life during, or as a direct result of, hostilities in the War of 1939-45; or (b) to the son or daughter of a member of the said forces or merchant marine who was seriously incapacitated either physically or mentally; or (c) to the son or daughter of any man or woman who served in any of Her Majesty's or Allied forces during 1939-45. Failing the receipt of applications from the above-mentioned groups, consideration will be given to applications from (d) sons or daughters of native or naturalized Canadians domiciled in Alberta.

Preference will be given to matriculants or to students who have completed the first year at University.

Apply by August 1.

**The Viscount Bennett Scholarships**—The late Right Honorable Viscount Bennett, P.C., K.C., LL.D., D.C.L., of Calgary and Mickelham, founded a trust to

support scholarships open to students who have resided for at least five consecutive years in Calgary, or within twenty miles of that city, or in Banff National Park.

Twelve scholarships of \$300.00 each are available for competitive award on the basis of academic attainment, good character and satisfactory personal qualities. The scholarships may be held in any year or program, but at least three will be reserved for matriculants.

Applications from undergraduates should be made by June 15.

**The William Asbury Buchanan Bursary of \$100.00** from a trust created by the will of the late Senator William Asbury Buchanan will be awarded to a student whose home is in the Lethbridge Public School District, the Lethbridge Separate School District or the Lethbridge School Division on a basis of academic standing, financial need and extracurricular activities. The award is tenable at Lethbridge Junior College or the University of Alberta at matriculation or undergraduate level and either at this or another university for graduate studies.

Apply by August 1.

**The Robert Tegler Special Scholarships**—The Robert Tegler Trust has provided two special scholarships for handicapped students, tenable in any faculty to which the students can be admitted, and available to new students or continuing undergraduates. While due weight will be given to the academic record of candidates, special consideration will be given to their background, financial need, nature of handicap, personal qualities, and other relevant points.

The scholarships may be awarded to the same students a second time, or even throughout the whole undergraduate course if, in the judgment of the committee, progress and other circumstances are such as fully to warrant it.

The value of each scholarship will be equal to the annual fees in the faculty concerned, plus a subsistence allowance of \$300.00 for the academic year.

Apply by August 1.

**The City of Calgary Undergraduate Scholarships.** Two scholarships of \$500.00 each are offered annually by the City of Calgary to Calgary students entering the second year at any approved university. The awards will be made on the basis of proficiency and financial need.

Written application setting forth the financial ability of the home and other pertinent information should be received by the City Clerk, Calgary by June 10 on forms available at the office of the City Commissioner, Calgary.

**The City of Edmonton Undergraduate Scholarships.** Four scholarships of the value of \$300.00 each are offered annually by the City of Edmonton to undergraduate students in any year of any Faculty in the University of Alberta. Two of these are restricted to students who have attended Edmonton Schools from Grade VII to Grade XII. The basis of award will be academic standing and financial need.

Written applications should be received by the City Clerk, Edmonton by June 15. Application forms are available at the office of the City Clerk or the City Comptroller, Edmonton.

**The Faculty Women's Club, Calgary, Prize** of \$15.00 will be awarded annually to the student with the highest academic standing of the second year in any Faculty of the University of Alberta, Calgary.

**The Glendale Kiwanettes of Calgary Scholarship** of \$100.00 is offered annually to a student of outstanding academic merit completing the first year of any Faculty at the University of Alberta, Calgary.

**The P. Lawson Travel Ltd. Summer Scholarships.** In order to promote greater understanding and good will between Canadians and other peoples, one or more scholarships of approximately \$1,000.00 each are offered each year to students from the University of Alberta, Calgary for summer study in Europe. Certain



countries may be specified by the donor. Preference will be given to students studying languages and who intend to pursue a teaching career in Alberta. Awards will not be made to students who have already travelled in, or whose native tongue is the same as, the stipulated country.

The award will be based on (a) academic standing, (b) community work, (c) extracurricular achievements and (4) financial need.

Apply by December 1.

**The Proctor and Gamble Student Bursary Fund**, of a total annual value of \$1,500, has been set up by the Proctor and Gamble Company of Canada, Limited, to benefit students in any Faculty or year who are in need of financial assistance in order to continue their studies. In addition the Company provides annually a grant-in-aid of \$600.00 to the University.

Students eligible for grants from this fund must have completed at least one year at the University and have obtained an overall average of 65% or more. They must expect to remain in Canada, and it is hoped that when they are in a financial position to do so they will contribute to the general bursary funds of the University, so that other students in turn may be helped.

Apply by June 15.

**The Samuel J. McCoppen Bursaries** of a total annual value of \$1,500.00 are provided under the will of the late Samuel J. McCoppen for undergraduates who have completed the first or second year at the University of Alberta. The basis of award will be financial need and academic standing.

Apply by June 15.

**N.F.C.U.S. Interregional Exchange Scholarships.** By arrangement between certain Canadian universities undergraduate or graduating students may apply for a year's study at another university in a region other than that in which the student is attending. The four regions are: Western, English Central, French Central and Atlantic. Applicants must be bona fide students who have completed at least one year of university work beyond complete senior matriculation. They may return to their home university after the exchange year or remain at their own expense. Successful candidates will be accorded remission of tuition fees for the exchange year. Travel assistance will be provided by N.F.C.U.S. (through a grant from Canada Council). Academic standing and extra-curricular activities will be considered.

Application forms may be had from the Calgary N.F.C.U.S. campus representative and must be filed by January 25.

**The German Academic Exchange Scholarship** is offered annually by the Federal Republic of Germany to a student from the University of Alberta. Applicants must have completed at least two years university work, be between 20-30 years of age, and be fluent in the German language.

The scholarship is tenable for 12 months beginning September 1 at a University or at an Academy of Art or Music. The scholarship covers tuition fees, partial travel costs and living allowance.

Apply by January 15 so that completed applications may be in Ottawa by February 1.

**The French Government Bursary.** The government of the French Republic offers annually to a graduating student a bursary to provide for study at a French university. There is no restriction on field of study provided the candidate has an adequate knowledge of French. The award is for one academic year and covers tuition fees, a living allowance and sea passage from France to Canada at the conclusion. The award is made by the Cultural Counsellor of the French Embassy in Ottawa, on the nomination of the University.

Apply by March 15.

**The Malcolm G. Taylor and The Violet Taylor Trophies** are awarded annually to outstanding students in Intra-mural Debating and Drama.

**Prizes and scholarships available in the various faculties at Calgary are listed below according to faculty.**

## THE FACULTY OF ARTS AND SCIENCE

**The Governor-General's Gold Medal** is awarded by His Excellency the Governor-General to the graduating student in an honors program in the Faculty of Arts and Science who has shown the highest distinction in scholarship.

**The Lieutenant Governor's Gold Medal** is awarded annually by His Honor, the Lieutenant Governor of Alberta, to the graduating student in an honors program of the Faculty of Arts and Science with the highest distinction in scholarship in that one of the two B.A. and B.Sc. degree programs in which the Governor General's medal was not awarded.

**The Faculty of Arts and Science Gold Medals**, provided by an anonymous donor, are awarded annually to the graduating student in the general B.A. program and the graduating student in the general B.Sc. program of the Faculty of Arts and Science who have shown the highest distinction in scholarship.

**The Board of Governors of the University Scholarship** of the value of \$100.00 is awarded to the student with the highest standing in the first year in Arts and Science, provided that an average of not less than 75% be obtained on the work of the year.

**The President's Scholarships**—Three scholarships of \$350.00 each were endowed in 1943 by Standard Investments Limited through the late Mr. Justice H. H. Parlee. The scholarships are open to undergraduates in the Faculty of Arts and Science and Faculty of Law. Proficiency in studies is the primary basis of award, and no award will be made to a student with less than 80%. Preferably these three awards will be given, one in a B.A. program, one in a B.Sc. program and one in Law. If the number of well qualified candidates exceeds the number of scholarships available, financial need will be taken into account in making the awards.

Apply by June 15.

**The Hamilton Watch Company Award** consisting of an engraved watch and a certificate will be awarded annually to a student of outstanding merit graduating from a B.Sc. Honors program of the Faculty of Arts and Science. The achievements of the student — either academic or extracurricular — in the Social Sciences or Humanities will be considered in making this award.

**The Great Books Awards** will be awarded annually to two graduating students from the Faculty of Arts and Science at the University of Alberta, Calgary; one to a B.Sc. graduate with high standing in arts courses and one to a B.A. graduate with high standing in science courses. These awards are donated by Encyclopedia Britannica of Canada Ltd. and each consists of a 54-volume set of the Great Books of the Western World.

**The Aluminum Company of Canada, Limited Scholarship** of the value of \$500 is offered annually to an undergraduate student in Engineering, Commerce, Law or Honors Arts and Science. The award will be based on academic standing financial need and general character of the applicant, and may be held by the same student more than once. In addition the Company will provide a grant-in-aid of \$200 to the University.

Apply by June 15.

**The James McCrie Douglas Memorial Scholarship**, valued at \$350.00, is available to a male student of outstanding merit who is entering the fourth year of an honors program in the Faculty of Arts and Science. The right is reserved to withhold the scholarship in any year if there is no candidate of sufficient merit.

**The Mary Cameron Douglas Memorial Scholarship**, valued at \$350.00, is available to a woman student of outstanding merit who is entering the fourth year of an honors program in the Faculty of Arts and Science. The right is reserved to withhold the scholarship in any year if there is no candidate of sufficient merit.

**The Kenneth William Moodie Scholarship**—As a memorial to her nephew, Flying Officer Kenneth William Moodie, a graduate in science of the University of Alberta who lost his life in May, 1942 while on operations, the late Miss Marion E. Moodie made provision in her will for an annual scholarship of \$150.00 to a student of outstanding merit entering the first year of the Faculty of Medicine or the third year of the B.Sc. program in the Faculty of Arts and Science. The basis of award will be academic attainment on the previous year's standing at the University of Alberta, financial need and evidence of satisfactory personal qualities.

Apply by June 15.

**The St. Hilda's Undergraduate Scholarship** of \$400 is provided annually by the St. Hilda's Trust Fund for a woman student of outstanding merit completing the first year and entering the second year of the Faculty of Arts and Science at the University of Alberta, Calgary.

Preference will be given to any applicant who is a graduate of St. Hilda's School for Girls or a descendant of any such graduate, or of a graduate of St. Hilda's College. Applicants with these qualifications must state so in a separate letter attached to the regular university application form. If no such candidate applies the award may be given to any woman student who fulfills the other conditions.

Apply by June 15.

**The Sunwapta Broadcasting Company Scholarship**, of the value of \$200 is offered by Mr. G. R. A. Rice to an outstanding student who is interested in the field of communications, as related to the Broadcasting and Television industry.

The award will be made to a student entering the fourth year in Engineering Physics (Electronics pattern), Electrical Engineering, or Honors Physics, or to a student entering the third or fourth year of a B.A. course who has displayed an active interest in student journalism, or in broadcast script writing. The basis of the award will be academic achievement in the work of the preceding session, particularly (in the case of Science students) in the courses directly concerned with electronics, or (in the case of Arts students) in senior English courses.

Apply before June 15.

**The Renkenberger Scholarship**, of the value of \$250 per year, provided under the terms of the will of the late Harvey Renkenberger of Barons, Alberta, will be awarded to a student who is especially interested in co-operative marketing. The selection will be based on academic record, ability in public speaking and participation in youth and co-operative activities.

The recipient must include at least one senior course in economics in his program of studies, preferably in agricultural economics or marketing, and must advance the principles of co-operation, on the conclusion of his university studies, as far as lies in his power.

The scholarship is open to students in any year in the Faculties of Agriculture, Arts and Science, Education, or Commerce. Subject to satisfactory progress, the award may be renewed year by year for a period not exceeding four years in all.

Apply by August 1.

**The R. L. King Memorial Scholarship in Journalism** of the value of \$500 is offered annually by Dr. Ben King in memory of his father, to a student entering the third year of a general course in the Faculty of Arts and Science who is interested in a career in journalism. The scholarship is renewable for a second year if the holder is registered in a course at a recognized University School of Journalism. The basis of the award will be the applicant's academic standing (which must not fall below 65%), general interests, and journalistic experience, if any.

Apply by June 15.

**The University Women's Club of Calgary Scholarship** of \$200.00 tenable at the University of Alberta is open to women students at the University of Alberta, Calgary who have completed the first year of Arts and Science. To

be eligible for the scholarship a student must have an average of at least 75% on the year's work.

**The Friends of the University Bursaries in Arts and Science**—The Friends of the University have provided two bursaries of \$100.00 each open to students who have completed the first two years and are entering the third year of the B.A. or B.Sc. courses in the Faculty of Arts and Science. The awards will be made on the basis of academic proficiency and of financial need.

Apply by June 15.

**The Society of Arts and Science, Calgary, Scholarships.** The Society will offer one or more scholarships of \$150.00 each, annually to an outstanding student or students who are members of the Society and who are enrolled in the Faculty of Arts and Science at the University of Alberta, Calgary. The basis of award will be (a) academic standing, (b) contribution to extra-curricular life on the campus, and (c) financial need. The award will be dependent on returning to the Calgary campus for the following academic year.

Recommendations will be made by the Executive of the Society.

### **Awards in the Departments of the Faculty of Arts and Science**

(Note: Awards in specified courses are open to students of other faculties registered in these courses.)

#### **Biochemistry**

**The Society of Chemical Industry Merit Awards.** Three awards will be made annually consisting of a gold key bearing the crest of the Society and a year's subscription to "Chemistry and Industry". The awards will be made to the student graduating with the highest standing in each of Honors Chemistry, Honors Biochemistry and Chemical Engineering, provided an average of 75% is attained in the final year and that the course has been completed in the normal number of years.

#### **Botany**

**The J. E. Olsen Prize,** of the value of \$35.00, is offered to the graduating student who has taken the highest average mark in two or more senior botany courses, provided that the student's general record is satisfactory to the Faculty Council.

#### **Chemistry**

**The Professor Osman James Walker Memorial Scholarship** of \$100 is awarded annually to the student selected by the Department of Chemistry who is graduating from the University of Alberta in the general on honors program and who will be proceeding to graduate work in the Department of Chemistry at the University of Alberta. Applications for this award must be received by the Department before May 1.

In the event that no suitable applicant is selected, the award will go to the student graduating with the highest record in the fourth year of the honors chemistry program.

**The Cave and Company Ltd., Scholarship in Chemistry** of the value of \$150 is awarded annually to a student selected by the Department of Chemistry who is graduating from the University of Alberta in the general program or honors program or in Chemical Engineering, and who will be proceeding to graduate work in the Department of Chemistry at the University of Alberta. Applications for this award must be received by the Department before May 1.

In the event that no suitable applicant is selected, the award will go to the student in the third year of the honors Chemistry program, with the highest academic standing.

**The Society of Chemical Industry Merit Awards.** Three awards will be made annually consisting of a gold key bearing the crest of the Society and a year's subscription to "Chemistry and Industry." The awards will be made to the student graduating with the highest standing in each of Honors Chemistry, Honors Biochemistry and Chemical Engineering, provided an average of 75% is attained in the final year and that the course has been completed in the normal number of years.

**The Chemical Institute of Canada Prize in Chemistry** of the value of \$25.00 in books is awarded annually to the student in Honors Chemistry who obtains the highest standing in the work of the third year, provided that the student's general record is satisfactory to the Faculty Council.

**The Pau' Edward Macleod Memorial Prize in Chemistry** of the value of \$25.00 was provided by the late Mrs. J. E. A. Macleod, Calgary, in memory of her son, who died while a student of the university. The award will be made to the student obtaining the highest standing in organic chemistry (Chemistry 250), in Calgary, provided the student otherwise secures a standing satisfactory to the faculty council and is carrying a full year's work.

### Classics

**The Ahepa Prize in Greek**—A prize of \$50.00 is offered by the Anglo-Hellenic Association in Western Canada to the student in Greek 200 or Greek 300 who secures the highest standing in a special examination in sight translation from English to Greek and from Greek to English, subject to the provision that the prize be granted to the successful candidate only if he or she continues in a course in senior Greek in the year immediately subsequent to the year in which the prize is won. If there is no suitable candidate from Greek 200 or Greek 300, the Department of Classics may at their discretion award the scholarship to a student in other courses in Greek.

### English

**The Rutherford Memorial Gold Medal**—is offered in memory of the late Honorable Alexander Cameron Rutherford, and is open for competition to students in the graduating year who attain first class standing in honors English.

**The Calgary Herald Prize in English 240**, of \$50.00 is awarded to a student in the University in Calgary for outstanding merit in English 240 providing the student secures first class standing in English 240 and is carrying a full year's work in which his standing is satisfactory to the faculty council.

**Beta Sigma Phi, Canadian Chapter** offers annually three scholarships of \$1,000.00 each, one of which is restricted to the Western Canada region. The scholarships will be tenable in the fourth year of an Honors Course in English. They will be awarded at the end of the third year on a basis of academic accomplishment and a confidential assessment of the student's ability by his or her teachers in English courses.

Apply to The Secretary, Canadian Universities Foundation, 77 Metcalfe Street, Ottawa 4, Ontario, by June 1.

### Entomology

**The Entomological Society of Alberta Prize**—An annual prize \$50.00 is offered by this Society to the student obtaining the highest standing in one or more senior courses in the Department of Entomology. The award is conditional on a satisfactory general record.

### Fine Arts

**The Fuller Brush Company Scholarships in Art**—Two scholarships of \$200.00 each are awarded to students of outstanding merit, who are entering either the

second or third year of the Art pattern in the Faculty of Arts and Science, or the third or fourth year of the Faculty of Education, majoring in Art, provided that such students are registered in a full year's program.

**The University of Alberta Alumni Prize in Fine Arts** of \$100.00 is offered annually by the General Alumni Association to the student in the Art Division of the Fine Arts Department who has demonstrated the best progress. Financial need will be considered in making the award.

**The Lerner Scholarship in Drama**—A scholarship of \$100.00 is offered annually by Mr. A. I. Lerner, in memory of his son, Irving Lerner. It is awarded to a student of outstanding merit enrolled in Drama 350 (Advanced Acting). To be eligible, a student must be majoring in Drama in the Faculty of Arts and Science or Education. The payment of this scholarship will be contingent upon the student's entering a further year of training in drama either at the University of Alberta or at another recognized college or university.

### Geography

**The Canadian Association of Geographers' Book Prize**—An award will be granted annually to the graduating student who has specialized in Geography and who has demonstrated the greatest proficiency in this subject.

**The Alberta Geography Prize** of \$25.00 in books and a one-year student membership in the Canadian Association of Geographers is offered annually by Mr. Donald C. Lofquist, M.A., to be awarded to the freshman student receiving the highest mark in Geography 201, in Edmonton or Calgary, provided the student is carrying a full year's work and passes in all other subjects.

### Geology

**The Association of Professional Engineers of Alberta Gold Medal** in Geology is

offered to the student with the highest general standing in the final year of Geology. This award may be given to a student graduating in either the three-year general course or the four year honor course, provided that an average standing of at least 75% is attained.

**The Dome Petroleum Limited Scholarship** of \$500.00 is offered annually to a student of outstanding academic merit entering the third year of an Honors program in Geology at the University of Alberta. The student must have attained 75% or better in his second year.

**The Mobil Oil of Canada Ltd. Scholarship in Geology**, consisting of a scholarship of \$400 to the student selected and a grant of \$400 to the Department in which the student is registered, is offered to a student entering the third year in honors geology in the Faculty of Arts and Science upon the basis of outstanding merit in his previous academic record, and evidence of initiative and good character.

Apply by June 15.

**The California Standard Company Geological Scholarship**, valued at \$400.00 is offered annually by the California Standard Company to a student of outstanding merit entering the final year in geology or geological engineering who is interested in oil exploration or production. Preference will be given to a male Canadian citizen. Apply by June 15.

**The John A. Allan Memorial Scholarship in Geology** of the value of \$200.00 is offered annually by the Association of Professional Engineers of Alberta in memory of Professor John A. Allan. The award will be made to the student who obtains the highest average standing in all the prescribed courses of first year Geology.



**The Alberta Society of Petroleum Geologists' Prize in Stratigraphy** is offered annually by the Alberta Society of Petroleum Geologists to the undergraduate student, who, in the opinion of the Department of Geology, has made the most progress in the study of strategic geology. The prize will consist of a copy of "The Western Canadian Sedimentary Basin" and a gift certificate entitling the recipient to his selection of the Society's publications to the value of \$50.00.

**The George E. Cole Memorial Prize in Economic Geology** of \$25.00 is offered annually by Mrs. Janet C. Cole in memory of her late husband, a former President of the Canadian Institute of Mining and Metallurgy, to the student obtaining the highest standing in Geology 460, provided that the student obtains at least 75% in the subject and is registered in a full year's program.

### History

**The Hudson's Bay Company Scholarship in History**, valued at \$300.00, is awarded to a student of outstanding merit who is entering the third or fourth year of the honors History program or the third year of the History pattern, in the Faculty of Arts and Science. A special condition of the award is that a senior or honors course in Canadian History must be included in the program of study. Apply by June 15.

**The John Henry Stanley Memorial Prize**, of the value of \$25.00 in books, is offered annually by Dr. George F. G. Stanley in memory of his father to be awarded annually to the student standing highest in Canadian History, provided this student is taking a full year's work and passes all other subjects.

**The Gordon Stanley Fife Memorial Prize**, of the value of \$25.00, is offered by Professor A. L. Burt, the University of Minnesota, in memory of his former colleague, to be awarded to the graduating student who has taken the highest average mark in two or more senior history courses.

**The George Malcolm Smith Memorial Prize** of the value of \$25.00 in books is offered annually by Professor Emeritus M. H. Long in memory of his former colleague, to be awarded to the student standing highest in Modern European History provided that this student takes first-class standing in the course, is carrying a full year's work and passes in all his other subjects.

**The Trenholme Dickson and Letitia S. Dickson Prize** of \$35.00 is awarded to the student with the highest standing in the field of Canadian History, provided such student has a first-class average in that subject and maintains an otherwise satisfactory standing.

**The Morden Heaton Long Prize**, of the value of \$25.00, is offered annually by his friends. It will be awarded to the student with the highest standing in British History, provided that this student takes a first-class standing in the course, is carrying a full year's work and passes in all his other subjects.

**The Calgary Canadian Club History Prize** of \$25.00 is awarded to the student who achieves the best record in any History course given at the University of Alberta, Calgary, provided that the student is registered in a full program of studies, that his mark in History is not lower than 75% and that he does not qualify for another award in the same subject.

### Mathematics

**The A. Wyman Memorial Gold Medal in Mathematics** is offered by the family of the late Mr. Wyman to the student in the graduating year of the honors program in Mathematics who secures the highest average standing, provided that the student shall have registered in a full year's program and shall be recommended for the award by the Department of Mathematics.

**Smalley's Radio Ltd. Bursary in Arts and Science** of the value of \$500.00 is offered annually by Smalley's Radio Ltd. of Calgary to a student completing first

year and continuing on to second year at the University of Alberta, Calgary in Honors Physics or Honors Mathematics. The award will be based on scholastic standing and financial need.

Apply by June 15.

**The Cyril G. Wates Memorial Prize** of \$50.00, offered by Mrs. Wates, will be awarded to a student of outstanding merit in Astronomy 253 or 410. The award will be based on the record in these courses only.

**The James McNish Chalmers Memorial Prize**, valued at \$50.00 is offered by Miss Clare McKinlay to a student of outstanding merit in Mathematics 255, provided that the student's record is otherwise satisfactory to the Faculty Council.

**The Mary Wyman Memorial Prize in Mathematics** to the value of \$25.00 in books is offered by the family of the late Mrs. Wyman to the student with the highest standing in Mathematics 200 or 201 in Calgary, provided that the student's general record is satisfactory to the Faculty Council.

### Modern Languages

**The Aristide Blais Prize in French**—A prize of \$25.00, the gift of Senator Blais, is to be awarded annually to an undergraduate fluent in the French language who obtains the highest first-class standing in French 360 to 400. The prize may not be awarded to the same student more than once, and in the event of a student qualifying for the prize a second time it may be awarded by reversion to another student with first-class standing in French 360 or 400.

**The Belgian Government Prize** of books is offered to the senior student who has the best record in French 360 or 370, providing that the student's record is satisfactory to the Faculty of Arts and Science.

**The Minister of Switzerland's Book Prize in French** is offered to the student who obtains the highest standing in French 375 or 380, provided that the student secures standing which is satisfactory to the Faculty Council.

**The Bronze Medal in French**, offered by the French Consul in Edmonton will be awarded to the winner of an essay competition to be held by the Modern Languages department.

**The French Government Book Prize** will be awarded to the student with the highest standing in French 200, providing such student's record is satisfactory to the Faculty Council.

**The Beauchemin Prize in French** valued at \$25.00 is offered by Dr. L. O. Beauchemin to the student attending the University in Calgary who achieves the highest standing in French 200, providing such student's record is satisfactory to the Faculty Council concerned.

**The German Government Prizes** in books are offered annually to the two senior students with outstanding merit in German 370 and 400 or 450, whichever is offered, provided that these students obtain an average of not less than 75% in these courses, are carrying a full year's work and have a record satisfactory to the Faculty Council. A prize may not be awarded to the same student more than once.

### Philosophy

**The MacEachran Gold Medal in Philosophy**, offered by Professor Emeritus J. M. MacEachran, will be awarded to the student in the Department of Philosophy graduating with Honors in Philosophy or Philosophy and Greek with the highest standing in the last two years of the course. The medal will be awarded only if the student obtains First Class Honors.

### Physics

**The Sam Fefferman Memorial Gold Medal in Honors Physics** is offered by the family of the late Mr. Fefferman to an outstanding student in the graduating year of the honors program in Physics. The student must have registered in a full year's program, obtain first class honors in Physics, and be recommended for the award by the Department of Physics.

**Smalley's Radio Ltd. Bursary in Arts and Science** of the value of \$500.00 is offered annually by Smalley's Radio Ltd. of Calgary to a student completing first year and continuing on to second year at the University of Alberta, Calgary in Honors Physics or Honors Mathematics. The award will be based on scholastic standing and financial need.

Apply by June 15.

**The California Standard Company Geophysical Scholarship**, value at \$400 is offered annually by the California Standard Company to a student of outstanding merit who is entering the third year of honors Physics and Geology, or Engineering Physics (Geophysics option) and who is interested in oil exploration or production.

Apply by June 15.

**The Society of Exploration Geophysicists Scholarships** — The Society offers annually four scholarships of \$500.00 each to Canadians majoring in Geophysics at Universities in Canada. The award will be based on academic record and financial need. Applicants may be matriculants entering first year University or undergraduates or graduate students.

Application forms may be secured from Canadian Society of Exploration Geophysicists Scholarship Sub-committee, P.O. Box 117, Calgary, Alberta, and should be returned completed to the same address by March 15.

**The Royal Canadian Legion Scholarship in Physics or Electrical Engineering** of \$400 is offered annually in the field of Physics or Electrical Engineering.

The terms of award are otherwise the same as for the Royal Canadian Legion Scholarship—see under General Awards.

Apply by June 15.

**The Northern Electric Undergraduate Scholarship**, which provides an amount not exceeding \$500 to cover tuition and general fees and the cost of books for one year, is awarded annually to a student of outstanding merit who is proceeding into the second, third and fourth year of Electrical Engineering, Engineering Physics or Honors Physics. The applicant must be a Canadian citizen or a landed immigrant and must normally have secured an average of at least 75% on the work of the preceding university year. Students who have held the scholarship previously are free to apply for renewal of the award.

Apply by June 15.

### Political Economy

**The Duncan Alexander MacGibbon Gold Medal in Political Economy** is awarded to the student registered in the department as an honors student in either Economics or Political Science who receives the highest average standing in four courses in either Economics or Political Science. In the case of Economics, one of the courses must be in economic theory, and in the case of Political Science, one of the courses must be in political theory.

### Psychology

**The MacEachran Gold Medal in Psychology**, offered by Professor Emeritus J. M. MacEachran, will be awarded to the student in the Department of Psychology, graduating in the B.A. or B.Sc. course with Honors in Psychology with the highest standing in the last two years of the course. The medal will be awarded only if the student obtains First Class Honors.

### Sociology

**The Samuel M. Strong Gold Medal and Prize in Sociology**, in memory of the late Dr. Strong, will be awarded to the student in the Department of Sociology graduating with Honors in Sociology with the highest standing in the last two years of the course. The medal will be awarded only if the student obtains First Class Honors.

### Zoology

**The William Rowan Memorial Scholarship** of \$100.00, in memory of the late Dr. Rowan, former head of the Department of Zoology, will be offered annually to a student of outstanding merit entering the fourth year of the Honors Zoology program.

## THE FACULTY OF AGRICULTURE

**The Alberta Institute of Agrologists Gold Medal** is offered annually primarily on the basis of scholarship as shown in the two senior years in the undergraduate courses in Agriculture, the weighted average in all subjects to be not less than 75%. Consideration will be given as well to qualities of leadership, personality and character.

**The Board of Governors of the University Scholarship** of the value of \$100.00 is awarded on the basis of the work of the first year in Agriculture, provided that an average of not less than 75% be obtained on the work of the year.

**The Dan Baker Scholarships.** Two scholarships of \$300.00 each are provided under the terms of the will of the late Dan Baker of Edmonton, Alberta. The Scholarships are open either to undergraduates in the Faculty of Agriculture who have completed at least one year of their course or to agricultural graduates of the University of Alberta who are carrying on research leading to a postgraduate degree in the Faculty of Graduate studies at the University of Alberta. These awards will be made on the basis of academic standing, financial need and personal character.

Apply by June 15.

**Loveseth Limited Scholarships in Agriculture**—Four scholarships of \$250.00 each are offered annually by Loveseth Limited to students of outstanding merit entering second, third, or fourth year Agriculture at the University of Alberta.

**The Douglas Farquhar Johnston Bursary in Agriculture** of the value of \$500.00 is offered annually to a student entering the final year of the Faculty of Agriculture. Preference will be given to a student in the Department of Animal Science. The award will be based on academic standing and financial need.

Apply by June 15.

**The Alberta Dairymen's Association Scholarship in Dairy Science** of the value of \$500.00 is open to undergraduates who have completed the second year in the Faculty of Agriculture and who are registered in a special program in the Department of Dairy Science. The award will be for scholarship attainment during the first two university years with a two-year average of not less than 65%. The scholarship may be renewed during the fourth year for continued meritorious work.

**The Alberta Dairymen's Association Summer Work Awards.** Two awards of the value of \$150 each are available annually to students who express an intention to specialize in Dairy Science and who, within the previous three years, have completed a summer's work in the dairy industry. These awards are available to students entering the first, second and third years in Agriculture.

**The J. K. Sutherland Memorial Scholarship** of the value of \$100.00 is offered in memory of Mr. and Mrs. Sutherland of Hanna, Alberta, by the Board of F.U.A.

District No. 11 and other interested persons. It is to be awarded to a student of outstanding merit completing the third year of the Faculty of Agriculture in the University of Alberta, provided that an average of at least 70% has been obtained in that year.

**The Canada Packers Scholarship**, valued at \$500, is offered annually to a student entering the fourth year of Agriculture at the University of Alberta. While preference may be given to a student majoring in a field of general interest to the packing industry, all students with high standing in the work of the third year will be eligible.

**The Canadian Feed Manufacturers' Association (Alberta Division) Scholarship** valued at \$150.00. This scholarship is to be made available to a third year student in Agriculture who has decided to major in nutrition in the Department of Animal Science and who has enrolled in an appropriate option in the third year. The scholarship is to be awarded to the eligible student who has the highest weighted average in courses completed during his second year in the Faculty of Agriculture.

**The Alberta Branch of the Canadian Seed Growers' Association Scholarship** valued at \$150.00. This scholarship is made available to a third year student in Agriculture who has decided to major in the Department of Plant Science and who has enrolled in an appropriate option in the third year. The scholarship is to be awarded to the eligible student who has the highest weighted average in courses completed during his second year in the Faculty of Agriculture.

**The Robert Gardiner Memorial Scholarships** are offered by the United Farmers of Alberta in memory of the late Robert Gardiner.

The scholarships are open only to students from farm homes; preference will be given to students born in Alberta.

One scholarship to the value of \$100.00 will be awarded to the student standing highest in the third year in the Faculty of Agriculture. A weighted average of 75% in all subjects will constitute the minimum scholastic requirement. In addition to academic standing, consideration will be given to qualities of leadership, personality and character. Application for this scholarship is not required.

One research scholarship to the value of \$100.00 will be open to members of the graduating class or to graduates who are proceeding to postgraduate work in Agriculture in the Faculty of Graduate Studies, University of Alberta.

Apply by March 1.

**The Ketchum Prize in Animal Science**, valued at \$50.00, is offered by the Ketchum Manufacturing Co. Limited of Ottawa. It will be awarded to a student majoring in Animal or Poultry Husbandry for outstanding merit in the work of the third year in the Faculty of Agriculture.

**The Entomological Society of Alberta Prize**—An annual prize of \$50.00 is offered by this society to the student obtaining the highest standing in one or more senior courses in the Department of Entomology. The award is conditional on a satisfactory general record.

**The Western Canadian Society for Horticulture Prize** of \$25.00 will be awarded annually to the graduating student with the best record in horticulture during the final two years, provided the student's record is considered satisfactory by the Faculty Council.

**The J. E. Olsen Prize**—See details under the Faculty of Arts and Science, Department of Botany.

## THE FACULTY OF COMMERCE

**The T. Eaton Company Gold Medal in Commerce** is awarded annually to the graduating student who receives the highest standing in the courses of the final two years, providing the student's record is considered satisfactory by the Faculty of Commerce.

**The Winspear, Hamilton, Anderson and Company Scholarship** of the value of \$500.00 is offered annually to a student at the University of Alberta proceeding to the degree of Bachelor of Commerce in Accounting for outstanding merit in the courses of the first and second years. The scholarship will be paid in two equal instalments; the first on registration in the third year and the second on registration in the fourth year. Payment of the second instalment is subject to the student obtaining an average of at least 70% in the courses of the third year.

**The Dominion Stores Limited Scholarship** of the value of \$500.00 is offered annually to a student at the University of Alberta proceeding to the degree of Bachelor of Commerce in Finance for outstanding merit in the courses of the first and second years. The scholarship will be paid in two equal instalments; the first on registration in the third year and the second on registration in the fourth year. Payment of the second instalment is subject to the student obtaining an average of at least 70% in the courses of the third year.

**The Hu Harries and Associates Scholarship** of the value of \$500.00 is offered annually to a student at the University of Alberta proceeding to the degree of Bachelor of Commerce in Economics for outstanding merit in the courses of the first and second years. The scholarship will be paid in two equal instalments; the first on registration in the third year and the second on registration in the fourth year. Payment of the second instalment is subject to the student obtaining an average of at least 70% in the courses of the third year.

**The Hudson's Bay Scholarship in Commerce** (provided jointly by the Edmonton and Calgary stores) of the value of \$500.00 is offered annually to a student at the University of Alberta proceeding to the degree of Bachelor of Commerce in Marketing for outstanding merit in the courses of the first and second years. The scholarship will be paid in two equal instalments; the first on registration in the third year and the second on registration in the fourth year. Payment of the second instalment is subject to the student obtaining an average of at least 70% in the courses of the third year.

**The Frederick Charles Manning Memorial Scholarship** of \$250.00 is offered in memory of their father by Mrs. F. Armour (Manning) Ford, Alberni, B.C., Mr. F. C. Manning, Calgary, Alberta, and Mr. A. H. Manning of Calgary, Alberta. The scholarship will be awarded on a basis of academic merit and extracurricular activities to a student completing the first or second year of the Faculty of Commerce at Calgary. The recipient will be expected to continue in the Faculty at Calgary if his program is available there.

**The Aluminum Company of Canada, Limited, Scholarship.** See details under Faculty of Arts and Science, Honors Courses.

**The Scholarship of the Western Daily Newspaper Advertising Managers' Association** of the value of \$100.00 is offered annually to a student of outstanding merit entering the third year of the Bachelor of Commerce program in Marketing based on the work of the first and second years. It is expected that such a student will have a primary interest in Advertising.

**The Institute of Chartered Accountants of Alberta Scholarship** of \$150.00 will be awarded annually to a student of outstanding merit entering the third year of the Bachelor of Commerce Program in Accounting based on the results of the first and second years.

**The Clarkson, Gordon and Co. Prize** of \$50.00 will be awarded annually to a student entering the second year in the Faculty of Commerce based on the results of Accounting 200 of the first year providing the student's record is otherwise satisfactory to the Faculty.

**The Christenson, Morrison and Co. Scholarship** of the value of \$300.00 is offered annually to a student at the University of Alberta proceeding to the degree of Bachelor of Commerce in Accounting for outstanding merit in the



courses of the first and second years. Character and general ability of the student will also be considered. The scholarship will be paid in two equal instalments; the first on registration in the third year and the second on registration in the fourth year. Payment of the second instalment is subject to the student obtaining an average of at least 70% in the courses of the third year.

**The T. Eaton Co., Ltd., Edmonton,** offers two book prizes as follows:

A prize of books to the student securing the highest standing in the courses of the first year.

A prize of books to the student securing the highest standing in the courses of the second year.

In both instances the award will be subject to the student's record being considered satisfactory by the Faculty of Commerce.

**The Friends of the University Bursary in Commerce**—The Friends of the University have provided a bursary of \$100.00, open to students who have completed the first or second year of the B.Com. degree course in the Faculty of Commerce. The award will be made on the basis of academic proficiency and of financial need.

Apply before June 15.

### THE FACULTY OF EDUCATION

**The Clarence Sansom Memorial Gold Medal in Education** is offered annually by the Alberta Teachers' Association to the student who has shown highest general proficiency in the final year of the Bachelor of Education program.

**The Board of Governors of the University Scholarship** of the value of \$100.00 is awarded on the basis of the work of the first year in Education, provided that an average of not less than 75% be obtained in the work of the year.

**The University Scholarships in Education** to the value of \$100.00 each are offered to students registered in a full program, who have completed the first year in the Elementary Route to the degree in Education. The awards will be made to the three students with the highest average standing, provided that this average does not fall below 75%.

**Alberta Teachers' Association Scholarships to Students in Education**—Four scholarship, in honor of Honorary Life Members of the Association, in the amount of \$500 each, are offered annually by The Alberta Teachers' Association to intramural students proceeding from the third to the fourth year of the Bachelor of Education program. The applicants for these scholarships must be bona fide residents of Alberta. Each must have a minimum average of 70 per cent and must give evidence of intention to follow teaching as a career. The scholarships are payable upon registration for intramural study in the fourth year of the Bachelor of Education program, Faculty of Education, University of Alberta, provided that study is continued at the next regular session of the University of Alberta following the award.

Apply to the Executive Secretary, Alberta Teacher's Association, Barnett House, Edmonton, by May 15.

**Alberta Teachers' Association Scholarships to Teachers in the Field**—Four scholarships, in honor of Honorary Life Members of the Association, each in the amount of \$500, are offered annually by The Alberta Teachers' Association to teachers in the field who, having completed three years of training and holding a permanent Alberta teaching certificate, are proceeding to the fourth year in the Bachelor of Education program. Applicants for these scholarships must be bona fide residents of Alberta, must have a minimum average of 70 per cent, and must give evidence of intention to follow teaching as a career. The scholarships are payable upon registration for intramural study in the fourth year of the Bachelor of Education program, Faculty of Education, University of Alberta after the award is made.

Apply to the Executive Secretary, Alberta Teachers' Association, Barnett House, Edmonton, by May 15.

**The Crown Zellerbach Canada Limited Scholarships in Education** of \$500.00 each are offered annually to two Canadian students of outstanding merit who hold an undergraduate degree from the University of Alberta (either Edmonton or Calgary) and who are proceeding towards a Bachelor of Education degree. One scholarship will be tenable at Edmonton and one at Calgary.

Apply by June 15.

**The Fuller Brush Company Scholarships in Art**—Two scholarships of \$200.00 each are awarded to students of outstanding merit, who are entering either the second or third year of the Art pattern in the Faculty of Arts and Science, or the third or fourth year of the Faculty of Education, majoring in Art, provided that such students are registered in a full year's program.

**Smalley's Radio Ltd. Scholarship in Education** of the value of \$500.00 is offered annually by Smalley's Radio Ltd. of Calgary, to the student graduating with highest standing in Physics or Mathematics in Calgary or Edmonton and who is proceeding toward a Bachelor of Education degree in Calgary.

Apply by June 15.

**The Lerner Scholarship in Drama**—A scholarship of \$100.00 is awarded to a student of outstanding merit enrolled in Drama 350 (Advanced Acting). See under Faculty of Arts and Science, Department of Fine Arts.

**The P.E.O. Southern Alberta Scholarship in Education**, of \$150.00, tenable at the University of Alberta, is open to the woman student at the University of Alberta, Calgary who achieves the best record in the first or second year of the secondary route of the Bachelor of Education program. To be eligible a student must have an average of at least 70% in the year's work and a generally satisfactory performance.

**The Calgary Section of the Council of Jewish Women** offers annually a scholarship of \$100 to the man or woman student who makes the highest standing in the first year of the Faculty of Education in Calgary in either the Elementary or Secondary Route program, and who will proceed to a second year in the next University session, provided that an average of not less than 75% be obtained on the work of the year. In the event that a suitable candidate is not found in the above area, the award may be given to a student of outstanding merit in the B.A. program of the Faculty of Arts and Science in Calgary.

**The Friends of the University Bursaries in Education**—The Friends of the University have provided two bursaries of \$100.00 each for students who have completed the first year and are entering the second year of the Faculty of Education. The awards will be made on the basis of academic proficiency and of financial need.

Apply by June 15.

**The Olive M. Fisher Prize** of \$50.00 is offered by Dr. Olive M. Fisher to a woman student at the University of Alberta, Calgary for outstanding merit in practice teaching in the second year of the B.Ed. program, Elementary Route, provided that her course of studies has not been interrupted by a year or more of teaching in schools.

**Calgary Gyro Club Scholarship in Education** of the value of \$400.00 is offered annually to a student of outstanding merit who holds an undergraduate degree from the University of Alberta and who is proceeding towards a B.Ed. degree in Calgary.

**PROVINCIAL ASSISTANCE FOR TEACHER EDUCATION****Standard E and Standard S programs.**

Students in the first and second years of the Standard E and Standard S programs may apply for a tuition grant to cover tuition fees. The number of grants awarded could possibly be limited.

Students in receipt of such grants shall undertake to render one year of teaching service in Alberta for each grant received. This service shall be made immediately on receipt of a teaching certificate unless the student proceeds to further training. Default of such undertaking shall make the grant or grants repayable to the Province.

Apply to the Chairman, Students Assistance Board, Department of Education, Administration Building, Edmonton.

**Third and Fourth years of a Bachelor of Education Program.**

A maximum of fifty tuition grants may be awarded in each of the third and fourth years of the Bachelor of Education program. Recipients of tuition grants shall undertake to render one year of teaching service in Alberta in public or separate schools, for each grant received. This service shall be rendered immediately following the completion of the fourth year, or of the third year if the student does not enrol for the fourth year immediately following the completion of the third year. In the event of failure to render such teaching service the grant shall become a debt payable to the Province of Alberta.

Apply to the Chairman, Students Assistance Board, Department of Education, Administration Building, Edmonton, by August 31.

**Tuition Grants for Graduates of other Faculties or other Universities**

Tuition grants may be granted by the Government of Alberta to graduates of the University of Alberta or of other universities. The applications will be considered by a Selection Committee which may base its recommendations on factors relating to suitability for teaching as well as academic standing. Candidates must elect a program of teacher education in the faculty of Education at the University of Alberta, leading to certification to teach at the high school level, and must undertake to teach at the junior or senior high school level in the public or separate school system of Alberta for one year following the completion of a year of training in the Faculty of Education or to refund the grant.

Apply to the Chairman, Students Assistance Board, Administration Building, Edmonton.

Applications which must be accompanied by official transcripts, should be sent to the Dean, Faculty of Education, University of Alberta, Edmonton by August 31.

**THE ALBERTA TEACHERS' ASSOCIATION LOANS**

The Alberta Teachers' Association has established a fund to provide loans to teachers who hold a permanent Alberta Certificate and who are in need of financial assistance to continue their preparation as teachers through intramural study. Applications will normally be considered during the months of May and September. Applications to be dealt with in May must be received by May 15. Applications to be dealt with in September must be received by August 31. Special applications may be considered during the University year.

If the loan fund is inadequate to meet all demands made upon it, priority will be given to applications in May. Inquiries and applications should be made to the Executive Secretary, Alberta Teachers' Association, Barnett House, Edmonton.

**LOCAL SCHOOL BOARD ASSISTANCE**

Some local School Boards provide grants or loans to students in teacher education programs. Students should inquire of their own principal or local School Board office.

**THE FACULTY OF ENGINEERING**

**The Henry Birks and Sons, Limited, Gold Medal** is offered annually to a graduating student from the Faculty of Engineering on a basis of academic standing in the final two years (not less than 75%) and qualities of leadership and character.

**The Association of Professional Engineers of Alberta Gold Medals** are offered to one graduating student in each of the departments of chemical, civil, electrical, engineering physics, mechanical, metallurgical, mining and petroleum engineering on the basis of individual talent, application and diligent study. For the purposes of this award the academic record of the third and fourth years is combined and a general average of at least 75% must be attained. The right is reserved to withhold the awarding of one or all of these medals if, in the opinion of the Faculty of Engineering, candidates do not show sufficient merit.

**The Society of Chemical Industry Merit Awards.** Three awards will be made annually consisting of a gold key bearing the crest of the Society and a year's subscription to "Chemistry and Industry". The awards will be made to the student graduating with the highest standing in each of Honors Chemistry, Honors Biochemistry and Chemical Engineering, provided an average of 75% is attained in the final year and that the course has been completed in the normal number of years.

(The following awards are listed alphabetically)—

**The Aluminum Company of Canada, Limited, Scholarship.** See details under Faculty of Arts and Science, Honors Courses.

**The American Society for Metals Foundation Scholarship in Metallurgy,** valued at \$500, will be given annually by the Foundation for Education and Research of the Society to a student who has completed his first or second year in Metallurgical Engineering. The award will be made on the recommendation of the Department of Mining and Metallurgy, based on the student's academic record and general ability, and will be paid after his registration in the following year of the Metallurgical Engineering course.

**American Society for Testing Materials Prize Awards**—Five prizes each consisting of a year's membership in the Society, a certificate, eight issues of the A.S.T.M. Bulletin and two books from a selected list on standards and materials, are offered annually to students in engineering on the basis of demonstrated ability and interest in the field of materials.

Prize winners are selected on the basis of their performance in courses in materials: Met.E. 252, Ch.E. 252, Met.E. 361 and C.E. 455; or on the basis of a summer report on a topic related to materials.

**R. Angus (Alberta) Limited Scholarship in Highway Engineering** of \$500.00 to be awarded annually to a student of outstanding merit entering fourth year Civil Engineering in the Highway Engineering Program. To qualify, the student must have taken a complete third year program in Civil Engineering at the University of Alberta and have attained an average of at least 75%.

Apply by June 15.

**The Association of Professional Engineers of Alberta Scholarship** of \$200.00 is offered annually to a student of outstanding merit completing the first year and entering the second year of the Faculty of Engineering at the University of Alberta, Calgary.

**The Board of Governors of the University Scholarship** of the value of \$100.00 is awarded annually to a student of outstanding merit entering the second year of Engineering, provided that an average of not less than 75% has been obtained on the work of the first year.

**The British America Paint Company Scholarship in Engineering** of \$500 is awarded annually to a student of outstanding merit entering the second year of the Faculty of Engineering. The award will be based on the work of the first year.

**The California Standard Company Scholarship in Petroleum or Chemical Engineering** of \$400.00, is offered annually to a student of outstanding merit entering the final year of petroleum or chemical engineering who is interested in oil exploration or production. Preference will be given to a male Canadian citizen.

Apply by June 15.

**The California Standard Company Geophysical Scholarship**, \$400.00 is offered annually to a student of outstanding merit who is entering the third year of honors Physics and Geology or Engineering Physics (Geophysics option), and who is interested in oil exploration or production. Preference will be given to a male Canadian citizen.

Apply by June 15.

**The Canada Cement Company Scholarships**—Two scholarships, each of the value of \$500.00 are offered annually to students of outstanding merit, one entering third year Civil Engineering and one entering third year Mechanical Engineering, at the University of Alberta, to be based on the work of the second year. To qualify a student must have completed a second year program of normal weight at the University of Alberta and have attained an average of at least 75%.

In the event that no student qualifies for one of the above, the award would be made available in the other department as a second award for that year.

**The Canadian Construction Association Essay Prize** of \$50.00 and an Engineer's Handbook will be awarded annually for the best essay on a subject related to construction, by a student in the final year of the Faculty of Engineering. Essays may be those requisite to the student's program or written specially. Selection will be made by the Faculty and the winning essay will then be eligible for a prize of \$100.00 on a Canada wide basis.

Essays to be submitted to the office of the Dean of Engineering by April 15.

**The Cave and Company Ltd. Scholarship in Chemistry**—Refer to details under Faculty of Arts and Science, Department of Chemistry.

**The Chemical Institute of Canada Prize in Chemical Engineering** of the value of \$25.00 in books is awarded annually to the student in Chemical Engineering who obtains the highest standing in the work of the third year, provided that the student's general record is satisfactory to the Faculty Council.

**The C.I.S.C. Scholarship in Structural Engineering** of the value of \$300 will be awarded annually by the Alberta Regional Committee of the Canadian Institute of Steel Construction to a student of outstanding merit entering fourth year Civil Engineering, preferably in the Structural Engineering option. To qualify, the student must have taken a complete third year program in Civil Engineering at the University of Alberta and have attained an average of at least 75%.

**The George E. Cole Memorial Prize in Economic Geology** of \$25.00 is offered annually by Mrs. Janet C. Cole in memory of her late husband, a former President of the Canadian Institute of Mining and Metallurgy, to the student obtaining the highest standing in Geology 460, provided that the student obtains at least 75% in the subject and is registered in a full year's program.

**The A. Cristall Memorial Scholarship** of \$10.00 is available for award annually to students of outstanding merit in Drafting 151 in first year Engineering. To be considered, the student must have passed all courses of the full first year, and have a general average of not less than 75%.

**The Dow Chemical Scholarship in Chemical Engineering**, consisting of a scholarship of \$500 to the student selected and a grant of \$250 to the Department of Chemical and Petroleum Engineering, is offered annually by Dow Chemical of Canada Limited to a student of outstanding merit on the basis of his academic record in the third year of Chemical Engineering and his interest in the Chemical Engineering Club of the University of Alberta and in student affairs generally. The Scholarship is tenable at the University of Alberta in the fourth year of Chemical Engineering.

**Engineering Institute of Canada Prize for Third-Year Students in Engineering**—The Engineering Institute of Canada offers a prize of \$25.00, open for competition to university students in Engineering following all of the prescribed courses in chemical, civil, electrical, mining, or mechanical engineering.

To be eligible a student must be a member of, and active in, such a students' engineering organization of the University as the Engineering Students' Society, the Mining and Geological Society, the Chemistry Club, the Students' Branch of the American Institute of Electrical Engineers or the Institute of Radio Engineers.

The recommendations for award shall be made, after the final examinations of the year, by a committee to be appointed by the Dean of Engineering at a faculty meeting in the session.

The bases of award shall be: (a) the average mark for the courses assigned to that year, this in no case to be less than 75%, and (b) the value of services rendered to a students' engineering organization of the University.

**The Gas Companies Undergraduate Scholarships in Engineering** of \$750.00 each are offered annually by Northwestern Utilities Limited and Canadian Western Natural Gas Company Limited to two students on the basis of academic achievement in the second year of the Engineering program. These scholarships are tenable in the third year of the Engineering program at the University of Alberta.

**The Sam J. Gorman Memorial Bursary in Engineering** of the value of \$300.00 is offered by his executors to a student who has completed the second year of any branch of Engineering at the University of Alberta. The award will be based upon high scholastic standing in the work of the year just completed and upon evidence of financial need.

Apply by June 15.

**The Johnston Testers Limited Scholarship** of the value of \$500.00 is offered to a student of outstanding merit entering the third year of Petroleum Engineering. The award will be based on the work of the second year of Engineering at the University of Alberta.

**The Douglas Farquhar Johnston Bursary in Engineering** of the value of \$500.00 is offered annually to a student entering the fourth year of a program in Mining Engineering or Metallurgical Engineering. The award will be based on academic standing and financial need.

Apply by June 15.

**The James A. Lewis Engineering Scholarship in Petroleum Engineering**, valued at \$500.00 is offered by James A. Lewis Engineering, Ltd. to a student entering the third year of Petroleum Engineering at the University of Alberta. Selection will be based on academic record in the second year of Engineering and on financial need.

Apply by June 15.

**The John Alexander McDougall Memorial Scholarship in Civil Engineering** of \$500 is offered annually to a student of outstanding merit entering the fourth year of Civil Engineering, based on the work of the third year.



**The Mobil Oil of Canada, Ltd. Scholarship** in Petroleum Engineering, consisting of a scholarship of \$400 to the student selected and a grant of \$400 to the department in which the student is registered, is offered to a student entering the fourth year of Petroleum Engineering on the basis of outstanding merit in the third year, and evidence of initiative and good character.

Apply by June 15.

**The Northern Alberta Branch of the Canadian Institute of Mining and Metallurgy** offers four prizes of \$15.00, one prize for the best student paper submitted during the term on each of the following subjects: (a) Mining, (b) Metallurgy, (c) Geology, and (d) Petroleum. To be eligible a student must be a member of the Mining and Geological Society of the University of Alberta. Recommendations for awards are to be made by each department concerned. The prize may be withheld if the papers submitted are not considered to be of sufficient merit to justify the awards.

**The Northern Electric Undergraduate Scholarship** which provides an amount not exceeding \$500 to cover tuition and general fees and the cost of books for one year, is awarded annually to a student of outstanding merit who is proceeding into the second, third or fourth year of Electrical Engineering, Engineering Physics or Honors Physics. The applicant must be a Canadian citizen or a landed immigrant and must normally have secured an average of at least 75% in the work of the preceding university year. Students who have held the scholarship previously are free to apply for renewal of the award.

Apply by June 15.

**The Oilfield Technical Society Prize**—A prize of \$100.00 is offered by the Oilfield Technical Society to the student in the fourth year of either Chemical or Petroleum Engineering who, writing on some phases of the petroleum industry, obtains the highest grade for a "Report on Practical Experience" submitted in fulfillment of the requirements of Chemical Engineering 473 (Petroleum Engineering 493).

**The Jessie E. Paull Memorial Prize** of the value of \$50.00 is awarded annually to the student obtaining the highest standing in C.E. 410 (Highway Engineering in the fourth year of civil engineering, provided the student obtains an average of at least 75% in this subject and is registered in a full year's program.

**The R.C.E. Memorial Scholarships**—The Royal Canadian Engineer Memorial Trust offers annually a scholarship to a student who has completed his third year in Engineering. Applicants must be members in good standing of the Officers' Training Corps and have had at least one summer's training with such unit. Award will be made on the basis of academic standing and qualities of leadership manifested in the activities of the Officers' Training Corps and in student affairs generally.

Apply by March 30.

**The Royal Canadian Legion Scholarship in Physics or Electrical Engineering** of \$400 is offered annually in the field of Physics or Electrical Engineering.

The terms of award are otherwise the same as for the Royal Canadian Legion Scholarship—see General Awards.

Apply by June 15.

**The Schlumberger of Canada Scholarship** of \$500.00 is offered to a student of outstanding academic merit entering the fourth year of Electrical Engineering at the University of Alberta based on the work of the third year. A grant-in-aid of \$500.00 is also provided to the University. This scholarship will be offered for the academic year of 1962-63 and 1963-64.

**The Sunwapta Broadcasting Company Scholarship of \$200.00** for students entering fourth year Engineering Physics or Electrical Engineering interested in the field of communications, as related to the Broadcasting and Television industry.

Apply by June 15. (See further details under Faculty of Arts and Science.)

**Underwood McLellan & Associates Limited Scholarship in Municipal Engineering** of \$200.00 to be awarded annually to a student of outstanding merit entering fourth year Civil Engineering in the Municipal Engineering pattern. To qualify, the student must have taken a complete third year program in Civil Engineering at the University of Alberta and have attained an average of at least 70%.

Apply by June 15.

**The John Wilcox Memorial Prize** of the value of \$50.00 provided by the Petroleum Engineering Class of '53, will be awarded annually to a student of outstanding merit, completing second or third year of Petroleum Engineering. General ability and financial need will be considered as well as academic standing. If no suitable candidate is found in Petroleum Engineering, the prize may be awarded in Chemical Engineering.

### THE SCHOOL OF HOUSEHOLD ECONOMICS

**The Warren W. and Ida E. Prevey Memorial Gold Medal in Household Economics** is offered by Dr. Esther and Miss Ruth Prevey in memory of their parents to the graduating student making the highest standing in the work of the last two years of the course leading to the degree of B.Sc. in Household Economics, provided such student's standing is deemed satisfactory to the School of Household Economics.

**The Russell Food Equipment Limited Scholarship** of \$350.00 is offered annually to a suitably qualified student graduating from the School of Household Economics of the University of Alberta who is proceeding, either at this or any other approved university, in an M.Sc. program in Foods or Nutrition, or proceeding into a Dietetic Internship at an approved institution. The scholarship will be payable after registration in the selected program.

**The Lorena Barfoot Prize** of \$50.00 is offered annually to a suitably qualified student graduating from the School of Household Economics of the University of Alberta and who is proceeding into a Dietetic Internship at an approved institution. The prize will be payable when the student has begun the Internship.

**The Mabel Patrick Scholarship** of the value of \$100.00 is awarded annually by the Alberta Home Economics Association to the student in Household Economics who takes the highest standing in the work as outlined for the first and second years, provided that the student passes all courses and obtains an average of not less than 75%.

**The Annie Gertrude Tory Scholarship** of the value of \$75.00 endowed to her memory by her husband, the late Henry Marshall Tory, first President of the University, is offered annually to the student in Household Economics who takes the highest standing in the work of the second year. The student must pass all courses and obtain an average of not less than 75% on the work of the year.

**The Gretta Shaw Simpson Memorial Prize** of the value of \$25.00 is offered annually by Miss Maimie S. Simpson in memory of her sister, formerly instructor in Bacteriology in this University. It is to be awarded to the student in Household Economics who takes the second highest standing in the work of the second year, provided that the student passes all courses and obtains an average of not less than 75%.

**The Maria Isabel O'Connor Prize** to the value of \$15.00 is offered annually in honor of the mother of the late Honorable G. B. O'Connor, Chief Justice of Alberta, to the student in second year Household Economics, who takes the

highest standing in Household Economics 304, provided that the student has carried the full work of the second year and has a record satisfactory to the School of Household Economics.

**The Phylis Osborne McGachie Bursary in Household Economics** of the value of \$100.00 is available to a student completing the second year of the B.Sc. course in Household Economics. The award will be made on the basis of academic record, which must not fall below second class, and of financial need.

Apply by June 15.

**The Alberta Wheat Pool Scholarships** of the value of \$200.00 each are offered annually to three students of outstanding merit entering the first, second and third years of Household Economics at the University of Alberta. These scholarships are available to students who have been members of Girls' Garden Club projects.

Applications must be submitted to the Superintendent of Schools of Agriculture, Provincial Department of Agriculture, Edmonton, by August 1.

**The Friends of the University Bursary in Household Economics**—The Friends of the University have provided a bursary of \$100.00, open to students who have completed the first year and are entering the second year of the B.Sc. degree course in the School of Household Economics. The award will be made on the basis of academic proficiency and of financial need.

Apply by June 15.

## THE SCHOOL OF PHYSICAL EDUCATION

**The Alumni Gold Medal in Physical Education** is offered by the Alumni Association of the University of Alberta to the outstanding graduating student in Physical Education, provided the student has been registered in a full year's program and has obtained an average of at least 75% in the final year.

**The J. K. Campbell & Associates Limited Scholarships** of \$150.00 and \$200.00 will be awarded annually to two students of outstanding academic merit completing the first and second years respectively in the School of Physical Education.

**Recreation Scholarships**—The Government of Alberta offers scholarships ranging from \$200 to \$500 to candidates wishing to take further training in Recreation. These scholarships are open to students entering their graduating year in Physical Education at the University of Alberta and to graduates of the University who have shown an active interest in Recreation through provision of leadership in that field, except to enter the Recreation profession in Alberta, show a high level of scholarship ability and possess high qualities of personality and character.

Apply to: Department of Provincial Secretary, Cultural Activities Branch, 425, Legislature Bldg., Edmonton, Alberta by March 31.

## PROVINCE OF ALBERTA ASSISTANCE

Under the Students Assistance Act (The Queen Elizabeth Education Scholarship Fund) assistance in various forms is available to students at the University of Alberta in Edmonton and Calgary.

For matriculants and undergraduates this assistance is also available for attendance in a course of University level at a Junior College which is affiliated with the University of Alberta, or at an approved College or University elsewhere if the course is not given at the University of Alberta.

For graduate study the assistance is available only for attendance in the Faculty of Graduate Studies at the University of Alberta.

Matriculants and undergraduates must be bona fide residents of Alberta.

Applicants must be full-time day students in a regular academic session.

### Province of Alberta Scholarships

There are 300 scholarships available for matriculants entering University who have a Grade XII average of 75% or better, and 300 to undergraduates with an average of 75% or better in the previous year.

These scholarships are for a basic \$100 for which application may be made without evidence of financial need. The amount may be increased according to a scale up to as high as \$1,250 on proof of financial need. If the application is for more than \$100 the form must be filled in completely in order to indicate the amount of the need.

Application should be made on the Provincial Government form.

Undergraduates should apply by June 30.

Matriculants should apply by August 1 or as soon as possible afterwards. Applications after August 31 will be considered in order of receipt.

### Grants and Loans

These are available on a basis of financial need only. The amount of a grant depends on the academic standing of the previous year. A loan may be granted either in conjunction with, or separately from, a grant. Loans are repayable to the Provincial Government.

*Matriculants* must have an average of at least 60%.

Applications should be made to The Secretary, Students Assistance Board, Provincial Department of Education, Administration Building, Edmonton.

*Undergraduates* must have an average of at least 60% for grants and at least 50% for loans.

Application should be made to the Administrator of Student Awards, University of Alberta, Edmonton, or to the Student Counselling Services Office, Calgary.

Students who anticipate that they will need financial assistance any time during the session should apply as follows:

Medicine and Dentistry—by September 15.

Other Faculties—by October 1.

However, further applications will be accepted up to January 3 from students who could not anticipate their needs earlier. Only in cases of emergency can applications be considered after January 3.

Applications from students with over 50% but repeating a full year will not be considered in the fall, but may be considered in the January group in which case mid-term examination results will be a determining factor.

**Students should note that payment of Grants and Loans will not be available for about eight weeks after the closing date for applications and should plan their financing accordingly, especially with reference to payment of fees.**

*Graduate Students* must have an average of at least 65% for either grants or loans.

Apply to Administrator of Student Awards, University of Alberta, Edmonton, early in the fall session or in January.

### Assistance for Teacher Education

Special financial assistance is available in all years for Faculty of Education students.

For details refer to Province of Alberta Assistance under the Faculty of Education.

## OTHER FORMS OF FINANCIAL ASSISTANCE

**University Loan Fund**—Through the generosity of private donors the University has at its disposal a Loan Fund from which loans may be made to students attending the University of Alberta, who could not otherwise complete their studies. In special circumstances loans may also be considered for Alberta students taking courses at an institution of University level elsewhere. Applicants must be making satisfactory academic progress. Interest at 5% per annum will be charged on loans. The money to establish this fund has been largely donated by Engineered Buildings, Limited, Calgary.

Apply to Student Counselling Services Office, Calgary.

**Leonard Foundation Scholarships**—The income of a trust created by the late Lieut.-Col. and Mrs. R. W. Leonard, St. Catharines, Ontario, will be expended in paying part of the college expenses of selected students at several institutions of Canada, including the University of Alberta, for from one to four years. The details of qualification and the procedure of application for these scholarships may be secured by corresponding with the trustees of the Leonard Foundation, the Toronto General Trust Corporation, Toronto, Ontario, or with the Administrator of Student Awards of the University of Alberta. It is desirable that applications be filed in January as the last date for their receipt in Toronto is March 31 of each year.

**Children of War Dead (Education Assistance) Act**—This act provides free and monthly allowances for children of veterans whose death was attributable to military service. Enquiries should be directed to the nearest district office of the Department of Veterans' Affairs.

**R.C.A.F. Benevolent Fund**—The Royal Canadian Air Force Benevolent Fund has made provision for loans for the benefit of former R.C.A.F. personnel or their dependents. Information may be obtained from the Administrator of Student Awards.

**The P.E.O. Educational Loan Fund**—This fund has been established by the P.E.O. Sisterhood for the purpose of assisting young women, properly and satisfactorily recommended and desiring to complete their higher education with a view to becoming self-supporting.

Loans are not made for a longer term than five years. They shall not exceed \$500.00 to any applicant for one year of study or \$1,000.00 for two or more years of study. The rate of interest is 3%. Since arrangements for loans require considerable time, applications should be placed as early as possible, preferably by August 1.

Further information concerning this loan fund may be secured from the Administrator of Student Awards, University of Alberta, Edmonton.

## UNIVERSITY OFFICER TRAINING UNITS

### THE REGULAR OFFICER TRAINING PLAN

#### Introduction

The Regular Officer Training Plan (ROTP) is in operation in the Canadian Services Colleges and in Canadian universities. The plan is a form of mutual assistance to the armed forces and to young Canadians seeking advanced education.

Under ROTP, successful applicants who have completed senior matriculation are enrolled in the armed force of their choice, and are provided with university

training. Students who are selected for the ROTP whilst attending university will be enrolled in the armed force of their choice while continuing their university studies.

Training in the ROTP is divided into two phases each year. Cadets will attend their university for the academic term and then will be sent to a unit of the forces in which they have been enrolled for summer practical training.

### Academic Training

In general terms it can be stated that all courses which are applicable to business and industry are also applicable to the armed forces. Courses are, therefore, offered in the following broad patterns:

*Engineering* — Civil, Mechanical, Electrical, Aeronautical, Engineering Physics, Chemical.

*Arts*—General, Honors, Pure Science.

*Special Courses*—Other specialist courses required by the armed forces.

(If any course exceeds four years, the student will be accepted in his final four years.)

The greatest requirement is for technically qualified officers, so that the major proportion of selected candidates will be required to accept training in engineering and science faculties.

### Conditions of Service

Successful applicants will be enrolled as Naval Cadets in the Royal Canadian Navy, Officer Cadets in the Canadian Army, and Flight Cadets in the Royal Canadian Air Force, according to their choice. They will attend the college or university selected. Undergraduates will complete the summer practical training program as do the reserve personnel of the appropriate university — Naval Training Division (RCN), Canadian Officers' Training Corps (Canadian Army), or University Reserve Training Plan (RCAF).

On successful completion of academic and military training, cadets will be promoted to commissioned officer rank in the regular force. *The privilege of release, if desired, will be granted after three years' commissioned officer service beyond graduation.*

Cadets are obliged to maintain good standing academically in college and throughout military training. A cadet who fails a year, or who lacks adequate standing in any subject of a previous year, loses his benefits. He may, on the recommendation of the faculty and the service concerned, be permitted to attend a year at his own expense and may, if successful, be reinstated.

### Financial Assistance

The cost of tuition and other essential fees will be borne by the Department of National Defence. The scale of pay and allowances for cadets under this plan is:

During the periods of attendance at university (academic year), cadets receive:

	Per month
Pay .....	\$ 63.00
Subsistence Allowance (where food and lodging is not provided) .....	65.00
<b>TOTAL</b> .....	<b>\$128.00</b>

During the period of practical summer training, cadets receive:

Pay .....	\$ 63.00
(Plus free rations, quarters and travel)	



An allowance of \$75.00 per year is made for the purchase of books and instruments.

An allowance of \$75.00 per month is made during flying training to all RCAF aircrew trainees.

Free medical and dental care and annual leave with full pay and allowances will be received throughout the entire training period.

### Admission Requirements

Applicants who possess the following qualifications will be considered for selection:

Citizenship—Canadian citizen; British subject resident in Canada, with status of landed immigrant.

Marital Status—Must be single and remain so during academic training.

Medical—Must be fit for enrollment in the branch and service of his choice.

Age—Candidates must have reached sixteenth but not twenty-first birthday on January 1 of year of entry into University.

Education—Acceptance for entrance to the University of Alberta without condition.

### Selection of Candidates

As future officers of the armed forces, applicants for the ROTP will appear before military interview boards for selection and will be assessed on their academic abilities, personality, character, appearance and leadership qualities.

### How to Apply

Application should be made through the Officer Commanding the unit in which the applicant is interested. Offices for all three services are located on the Calgary Campus.

### Medical Subsidization Plan

#### Scope

This plan applies to the three Armed Services. The plan provides for subsidization of medical students during the final three years of university and the interne year. Application may be made at any time after the commencement of the third from last academic year up to the end of the interne year.

#### Status

Applicants are enrolled in their initial year as an officer cadet (or equivalent). On successful completion of the first academic year under the plan the student is promoted to Second Lieutenant (or equivalent).

#### Benefits

	As Officer Cadet	As Second Lieutenant	
		Single	Married
Pay of Rank .....	\$ 63 per mo.	\$225 per mon.	\$225 per mon.
Marriage Allowance .....			40 per mon.
Subsistence Allowance .....	65 per mon.	75 per mon.	110 per mon.
Totals .....	\$128 per mon.	\$300 per mon.	\$375 per mon.

In addition all fees are paid and the student receives a grant of \$75.00 for books and instruments.

Free medical and dental care and annual leave with pay are provided.

### Promotion and Terms of Service

After internship and registration with a Provincial College of Physicians and Surgeons, the officer is promoted to the rank of Lieutenant, Captain or Flight

Lieutenant and will be required to serve a period of full duty for 3 years as a commissioned officer.

### Dental Corps Subsidization Plan

Dental undergraduates may apply for subsidization under this plan at any time after entering courses leading to the degree of Doctor of Dental Surgery, or upon being qualified to enter into a course, i.e.; applicants may not be enrolled until they are within 45 months of being qualified to receive a license to practice dentistry.

#### Status

An applicant accepted under this plan will be enrolled in the Canadian Army (Regular Force) in the Royal Canadian Dental Corps for a fixed term in the rank of Second Lieutenant if in his penultimate or final year of his course in dentistry or, if he has not yet entered his penultimate year, in the rank of Officer Cadet.

#### Benefits

	As Officer Cadet	As Second Lieutenant	
		Single	Married
Pay of Rank .....	\$ 63 per mon.	\$225 per mon.	\$225 per mon.
Marriage Allowance .....			40 per mon.
Subsistence Allowance .....	65 per mon.	75 per mon.	110 per mon.
Totals .....	\$128 per mon.	\$300 per mon.	\$375 per mon.

In addition all fees are paid and the student receives a grant of \$75.00 for books.

Allowance will be made for the full cost of expendable instruments and supplies for the four years, as approved by the Faculty of Dentistry.

Free medical and dental care and annual leave with pay are provided.

#### Promotion and Terms of Service

Upon successful completion of his course and obtaining his license to practice dentistry, a candidate under this plan will be promoted as a dental officer to the rank of Captain effective June 1st of that year, and shall serve thereafter for a fixed period of five years from the date of such promotion.

### RESERVE OFFICER TRAINING PLAN

#### University Naval Training Division

The purpose of the University Naval Training Divisions is to select and train university students for commissioned rank in the Royal Canadian Navy (Reserve).

#### Admission Requirements

- The candidate must be a Canadian citizen, or British subject resident in Canada with the status of a landed immigrant.
- He must be medically fit, possess the required officer-like qualifications and have a sound academic record.
- He must be 17 but not over 22 years of age prior to December 31 in the year of his enrollment in the UNTD.
- He must be registered in the first or second year of university work.

#### Method of Enrollment

Students should apply for enrollment in the UNTD during the first 2 weeks of registration. An information centre is located on the campus during certain days of the week for registration. An officer is in attendance to assist all interested students.

#### Selection Boards

Students who join the UNTD are entered as probationary cadets on the Active List of the Royal Canadian Navy (Reserve) and during January of their first year

appear before a Selection Board to determine their suitability for commissioned rank. Successful candidates are promoted to the rank of Cadet in the Royal Canadian Navy (Reserve).

### Training Programme

- (a) During the academic year the UNTD training programme consists of one training night a week commencing in late September. The training is carried out through the media of lectures and instructional films and requires three winters to complete.
- (b) During the summer, Cadets must train a minimum of 17 weeks during their first two summers in ships and establishments of the Atlantic Command. The third summer training period is optional. Cadets may avail themselves of the opportunity to serve longer than 17 weeks each summer if they so desire.

### Rates of Pay

- (a) During winter training Cadets may receive up to 16 days' pay for attendance on training nights or a maximum of one hundred and twenty dollars (\$120.00).
- (b) During the summer training, Cadets receive pay at the rate of \$225.00 per month plus transportation and traveling expenses. In addition, rations, quarters, and medical services are supplied.

### General

- (a) Cadets are issued with all required uniforms.
- (b) When a Cadet has successfully completed three winters and two summers he will appear before a promotion board for his final assessment for commissioned rank. If he passes this board, he will be promoted to Sub-Lieutenant at the commencement of the next academic year. For further information consult the R.C.N. Recruiting Officer, 608 Centre Street South, Calgary, Alberta.

## CANADIAN OFFICERS TRAINING CORPS (University of Alberta Contingent)

The purpose of the Canadian Officers Training Corps programme is to provide a means whereby university undergraduates can qualify for appointments in the Canadian Army, Regular Force or Reserves, as a commissioned officer.

The training programme, which covers a minimum of two years; consists of two portions, a theoretical part taken at the university during the academic year and a practical part taken during the summer at a Regular Force Army establishment. The theoretical phases at the university consist of 64 periods of instruction spread through the academic year. Candidates usually progress through three such phases in consecutive years. The practical portion taken during the summer at a school or unit of the Regular Army consists of 12 to 22 weeks of instruction with pay.

### Eligibility

To enrol in the C.O.T.C. a student must be:

- (a) a Canadian citizen or British subject with landed immigrant certificate;
- (b) physically fit and between the ages of 17 and 33;
- (c) able to qualify as a second Lieutenant before graduation.

Some Corps of the Army will accept students from any faculty and up to the maximum age listed. In others there are certain limitations. For example the Corps of Royal Canadian Engineers and the Royal Canadian Electrical and Mechanical Engineers will only accept students registered in engineering. The Army Resident Staff Officer should be consulted for complete up-to-date information.

Female applicants in first year Household Economics **only** may be enrolled in the Royal Canadian Army Medical Corps for training as Dietitians.

**Rank and Status**

All candidates are enrolled as officer cadets. After successful completion of two theoretical and two practical phases of training officer cadets are commissioned in the rank of second lieutenants. On the completion of three theoretical and practical phases of training and attainment of a degree, second lieutenants are eligible for immediate appointment to the Regular Army or Militia in the rank of lieutenant.

**Pay**

During the summer training periods COTC officer cadets and second lieutenants receive \$225.00 pay each month. They are also provided with free room and board, uniforms and medical care. First class transportation to the place of summer training and return is provided free of charge.

During the winter training period, up to 16 days pay plus any additional amounts authorized may be earned.

**Application and Enrolment**

Students who are interested should apply as early as possible to the Army Resident Staff Officer. Applications may be accepted as late as January 15th.

**ROYAL CANADIAN AIR FORCE (University Squadron)****Object**

R.C.A.F. University Squadrons were formed at the major Canadian universities to promote a strong liaison and mutual understanding between the universities and the Royal Canadian Air Force. These squadrons will provide a flow of trained university graduates into the R.C.A.F. Regular or Reserve as commissioned officers.

**Qualifications**

Specific qualifications for enrolment in the University Reserve Training Plan are as follows:

- (a) Age. A male applicant must have reached his 16th but not his 26th birthday on date of application. A woman applicant must reach her 18th birthday prior to commencement of her first period of summer training. Applicants under 18 years of age must produce the written consent of a parent or guardian.
- (b) Medical category as established by the R.C.A.F.
- (c) Marital Status. A male applicant may be married or single. A woman applicant must be single.
- (d) Citizenship. An applicant must be a Canadian citizen, or a British subject permanently resident in Canada with the status of "landed immigrant."

**Note:** British subjects resident in Canada on a "student" or other visa are not eligible for enrolment.

**Application**

Application forms may be obtained at the Squadron Office. The selection of Flight Cadets for the University Squadron will commence at the beginning of the fall term and terminate January 31st.

**Training Program**

The three year training program consists of formal training and supervised employment at R.C.A.F. schools and stations for a minimum of seventeen weeks and a maximum of twenty-two weeks each summer provided it can be completed during the period 15 April to 15 September. In addition, Flight Cadet and Pilot Officer members of the squadron attend weekly lectures and parades during each of the three winter terms preceding summer training.

**Officer Development**

During the first summer of training, all Flight Cadets undergo an initial Basic Officer Development Course at the R.C.A.F. Reserve Officers' School, in

which they receive instruction in the duties, requirements and responsibilities of junior officers. This training involves the military, executive and development phases, which, besides the military and executive aspects of the R.C.A.F., are designed to train students as leaders who are well informed in world affairs and the role of Canada's defence forces in the current political and military situation, who are able to express themselves clearly and effectively, and who will make good officers and good citizens.

### **Formal Training**

Most technical list and non-technical URTP Flight Cadets, on completion of the Basic Officer Development Course, proceed to R.C.A.F. schools to commence formal Air Force courses in their designated branches.

## **OFFICER TRAINING UNITS**

### **Winter Training Program**

During the academic year, members of the University Squadron attend weekly lectures on orientation, executive and officer development subjects. The first winter's lectures are preparatory to entry into URTP and the Air Force. Lectures given during the second and third winters extend and amplify knowledge acquired during the officer development phases of summer training. Emphasis is placed on the integration of social and military sciences and the determination of their application to current affairs.

### **Officer Employment**

Flight Cadets in those branches for which formal courses are not given during the summer months are employed in an "understudy" capacity at various units. This employment, which commences at the Officer Development Course, provides the students with experience in Air Force Procedure and operation and allows them to observe the application of what they are taught at the Reserve Officers' School.

### **Status**

Accepted university students are appointed in the R.C.A.F. Primary Reserve (University list) in the rank of Flight Cadet.

Flight Cadets have the status of subordinate officers for all purposes and wear the rank of Pilot Officer.

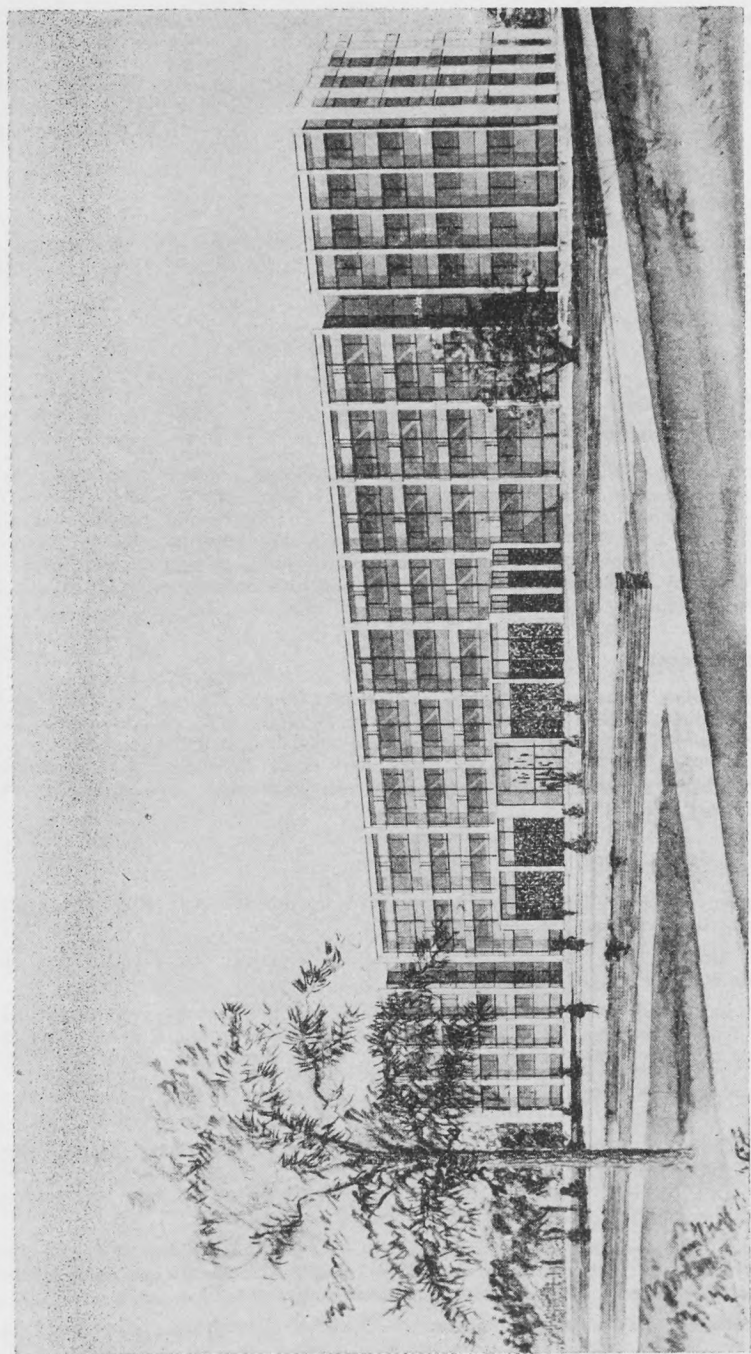
After successful completion of three summers of training and subsequent graduation from university, Pilot Officers may be appointed to the R.C.A.F. Regular, Auxiliary or Supplementary Reserve in the rank of Flying Officer.

### **Pay**

Flight Cadets are paid at the rates prevailing for Pilot Officer. Net earnings for each summer employed vary between \$750 and \$1,200, depending on the length of duty. Winter pay is according to attendance at lectures and parades and amounts to approximately \$100 if all sessions are attended.

Medical and dental care is provided during summer employment and first class rail transportation is issued on posting. Flight Cadets are issued with full kit of uniform for summer and winter wear upon acceptance.

For detailed information concerning Reserve University Squadron and R.C.A.F. (Regular), consult the Commanding Officer of the Squadron or the Resident Staff Officer (R.C.A.F.).



"PROPOSED LIBRARY BUILDING, TO BE COMPLETED IN 1963."



## PART IV

### *13 Timetable*

1962-63

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION

## TIMETABLE 1962-63

**LEGEND:** \* more than one hour lecture or laboratory. ' first term ' number of sections.  
 = same course as another offered at the same time. " second term

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:30 A.M.	Bot. 371 Bus. 200 Bus. Law 310 Chem. 230/2 Chem. 250 Lab.* Chem. 230/2 Lab.* Chem. 312 Lab.* (2) Chem. 430 Classics 353 Econ. 350 Ed. CI 271 Ed. CI 286 Ed. CI 306 Ed. CI 306 Ed. CI 328 Ed. CI 462 Ed. CI 486 Ed. CI 491 Ed. PSY 476 Ed. IA 280* French 200 Lab. Geol. 353 Math. 200/1/2 Math. 304 Math. 306 Phys. Ed. 215' * Phys. Ed. 403 " * Phys. 240 Psych. 202 Soc. 310* Zool. 362	Bot. 271 Lab.* Chem. 230/2 Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 312 Lab.* (2) Chem. 430 Ed. CI 286 Ed. PSY 276 (2) Ed. ADM 261 (2) Engl. 240 (8) French 200 Lab. Math. 200/1/2 Math. 303 Math. 304 Math. 306 Phys. Ed. 215' * Phys. Ed. 403 " * Phys. 240 Psych. 202 Soc. 310* Zool. 362	Bot. 371 Bus. 200 Bus. Law 310 Chem. 230/2 Chem. 230/2 Chem. 230/2 Lab.* Chem. 312 Lab.* (2) Chem. 430 Classics 353 Econ. 350 Ed. CI 271 Ed. CI 286 Ed. CI 306 Ed. CI 328 Ed. CI 462 Ed. CI 486 Ed. CI 491 Ed. PSY 476 Ed. IA 280* French 200 Lab. Geol. 353 Math. 200/1/2 Math. 303 Math. 304 Math. 306 Phys. Ed. 311' Phys. Ed. 405" Phys. 240 Lab.* Phys. 445 Pol. Sci. 371 Psych. 202 Psych. 340 = Soc. 202 Soc. 340 = Zool. 300	Bot. 371 Lab.* Bot. 371 Lab.* Chem. 230/2 Chem. 230/2 Lab.* Chem. 230/2 Lab.* Chem. 312 Lab.* (2) Chem. 430 Ed. CI 286 Ed. PSY 276 (2) Ed. ADM 261 (2) Engl. 240 (8) French 200 Lab. Geol. 201 Lab.* Math. 200/1/2 Math. 303 Math. 304 Math. 306 Physics 200 Lab. Psych. 202 Soc. 310* Zool. 220 Lab.	Bot. 371 Bus. 200 Bus. Law 310 Chem. 230/2 Chem. 230/2 Lab.* Chem. 230/2 Lab.* Chem. 430 Lab.* (4) Chem. 430 Classics 353 Econ. 350 Ed. CI 271 Ed. CI 286 Ed. CI 306 Ed. CI 328 Ed. CI 462 Ed. CI 486 Ed. CI 491 Ed. PSY 476 Ed. IA 280* French 200 Lab. Geol. 201 Geol. 353 Math. 200/1/2 Math. 303 Math. 304 Math. 306 Phys. Ed. 311' Phys. Ed. 405" Phys. 242 Lab.* Physics 445 Pol. Sci. 371 Psych. 202 Psych. 340 = Soc. 202 Soc. 340 = Zool. 300	Bot. 330 Lab.* Chem. 230/2 Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 430 Ed. adm 261 (2) Engl. 240 (8) Geol. 201 Lab.* Math. 200 Physics 100 Lab.* Physics 200 Lab.* Physics 240 Psych 202 Zool. 220 Lab.* Zool. 362

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A.M.	Acctg. 200 Anthro. 202 Art. 230* Bot. 330 Chem. 230/2 Lab.* Chem. 250 Lab.* Chm. 312 Lab.* (2) Classics 346= Ed. CI 263 Ed. CI 275 Ed. CI 281 Ed. CI 283 Ed. CI 284 Ed. CI 291 Ed. CI 461 Ed. CI 463 Ed. CI 481 Ed. CI 483 Ed. CI 484 Ed. psy 276 (2) Ed. adm 461 Ed. IA 280* Engl. 384 German 100 German 400 Hist. 200 Math. 200/1/2 Math. 310 Philos. 346= Physics 340 Pol. Sci. 320 Psych. 364 Soc. 430 Zool. 350	Acctg. 200 Lab.* Astron. 478 Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chm. 312 Lab.* (2) Classics 346= Ed. CI 284 Ed. CI 471 Ed. CI 473 Ed. CI 475 Ed. CI 484 Ed. FDN 201 Ed. PSY 476 Ed. ADM 261 (2) Engl. 348 French 200 (3) French 200 Lab. Geol. 232 Hist. 210 Math. 200/1/2 Philos. 354 Phys. Ed. 215* Phys. Ed. 403** Physics 242 Physics 360 Soc. 202 Soc. 310* Zool. 300 Lab.*	Acctg. 200 Anthro. 202 Art 230* Bot. 330 Chem. 230/2 Lab.* Chem. 250 Lab.* Chm. 312 Lab.* (2) Classics 346= Ed. CI 263 Ed. CI 275 Ed. CI 281 Ed. CI 283 Ed. CI 284 Ed. CI 291 Ed. CI 461 Ed. CI 463 Ed. CI 481 Ed. CI 483 Ed. CI 484 Ed. PSY 276 (2) Ed. ADM 461 Ed. IA 280* Engl. 384 German 100 German 400 Hist. 200 Math. 200/1/2 Math. 303* Math. 310 Philos. 346= Physics 240* Physics 340 Pol. Sci. 320 Psych. 364 Soc. 430 Zool. 350	Acctg. 300 Lab.* Astron. 478 Bot. 370 Lab.* Bot. 371 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chm. 312 Lab.* (2) Classics 346= Ed. CI 284 Ed. CI 471 Ed. CI 473 Ed. CI 475 Ed. CI 484 Ed. FDN 201 Ed. PSY 476 Ed. ADM 261 (2) Engl. 348 French 200 (3) French 200 Lab. Geog. 201 Lab.* Geol. 232 Hist. 210 Math. 200/1/2 Philos. 354 Physics 242 Physics 360 Soc. 202 Soc. 310* Zool. 220 Lab.*	Acctg. 200 Anthr. 202 Art 230 Bot. 330 Chem. 230/2 Lab.* Chem. 250 Lab.* Chm. 312 Lab.* (2) Classics 346= Ed. CI 263 Ed. CI 275 Ed. CI 281 Ed. CI 283 Ed. CI 284 Ed. CI 291 Ed. CI 461 Ed. CI 463 Ed. CI 481 Ed. CI 483 Ed. CI 484 Ed. PSY 276 (2) Ed. ADM 461 Ed. IA 280* Engl. 384 German 100 German 400 Hist. 200 Math. 200/1/2 Math. 310 Philos. 346= Physics 242 Lab.* Physics 340 Pol. Sci. 320 Psych. 364 Soc. 430 Zool. 350	Astron. 478 Bot. 330 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 450 Ed. CI 473 Ed. CI 475 Ed. FDN 201 Ed. PSY 474 Lab.* Ed. PSY 476 Ed. ADM 261 (2) Engl. 348 French 200 (3) Geog. 201 Lab.* Geol. 201 Lab.* Hist. 210 Math. 200 Philos. 354 Physics 100 Lab.* Physics 200 Lab.* Physics 242 Physics 360 Soc. 202 Zool. 220 Lab.* Zool. 362 Lab.*

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION

## TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
10:30 A.M.	Acctg. 300 Art 230*	Acctg. 200 Lab.* Bot. 271 Lab.*	Acctg. 300 Art 230*	Acctg. 300 Lab.* Bot. 370 Lab.*	Acctg. 300 Bot. 370	Bot. 330 Lab.* Chem. 230/2 Lab.*
	Bot. 370	Chem. 230/2 Lab.*	Chem. 230/2 Lab.*	Chem. 230/2 Lab.*	Chem. 230/2 Lab.*	Chem. 250 Lab.*
	Chem. 230/2 Lab.*	Chem. 250 Lab.*	Chem. 230/2 Lab.*	Chem. 230/2 Lab.*	Chem. 430 Lab.*	Ed. CI 320*
	Econ. 323	Chm. 312 Lab.*	(2)Econ. 320	Chm. 312 Lab.*	(2)Econ. 320	Ed. PSY 276 (2)
	Ed. CI 261	Econ. 380*	Ed. CI 261	Econ. 380*	Ed. CI 261	Ed. PSY 474 Lab.*
	Ed. CI 236	Ed. CI 261*	Ed. CI 286	Ed. CI 261*	Ed. CI 286	French 350
	Ed. ADM 261 (2)	Ed. CI 286	Ed. ADM 261 (2)	Ed. CI 286	Ed. ADM 261 (2)	Geog. 201 Lab.*
	Ed. ADM 461	Ed. PSY 276 (2)	Ed. ADM 461	Ed. PSY 276 (2)	Ed. ADM 461	Geol. 201 Lab.*
	French 200 (2)	French 350	French 200 (2)	French 350	French 200 (2)	Hist. 324
	French 330	German 100 Lab.	French 330	Germ. 100 Lab.	French 330	Math. 200
	Geog. 400	Hist. 324	Geog. 400	Hist. 324	Geog. 400	Math. 270
	Geol. 201	Math. 200/1/2 (2)	(2)Geol. 201	Math. 200/1/2 (2)	Geol. 201	Physics 200 Lab.*
	Germ. 330	Math. 270	Germ. 330	Math. 270	Germ. 330	Physics 400
	Hist. 210	Math. 303	Hist. 210	Math. 303	Hist. 210	Zool. 220
	Hist. 327	Mus. 200	Hist. 327	Mus. 200	Hist. 327	Zool. 220 Lab.*
	Latin 300	Mus. 203	Latin 300	Mus. 203	Latin 300	Zool. 362 Lab.*
	Math. 200/1/2 (2)	(2)Phys. Ed. 200*	Math. 200/1/2 (2)	Phys. Ed. 200*	Math. 200/1/2 (2)	
	Math. 270	Phys. Ed. 215*	Math. 270	Phys. 400	Math. 270	
	Math. 303	Phys. Ed. 403*	Math. 303	Soc. 310*	Math. 303	
	Math. 354=	Physics 400	Math. 354=	Zool. 220	Math. 354=	
	Mus. 203	Sociol. 310*	Philos. 260	Zool. 220 Lab.*	Music 203	
	Philos. 260	Zool. 220	Phys. Ed. 243'	Philos. 260	Philos. 260	
	Phys. Ed. 243'	Zool. 200 Lab.*	Phys. Ed. 305''	Phys. Ed. 243'	Phys. Ed. 243'	
	Phys. Ed. 305''		Physics 240*	Phys. Ed. 305''	Phys. Ed. 305''	
	Physics 380		Physics 380	Physics 242 Lab.*	Physics 380	
	Stat. 354=		Stat. 354=	Physics 380	Stat. 354=	
	Zool. 220		Zool. 220	Stat. 354=	Zool. 220	

# FACULTIES OF ARTS & SCIENCE. COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION

## TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
11:30 A.M.	Bot. 271	Chem. 230/2	Bot. 271	Chem. 230/2	Bot. 271	Chem. 230/2
	Chem. 230/2 P.	Chem. 230/2 P.	(2)Chem. 230/2	Chem. 230/2 P.	(2)Chem. 230/2	Chem. 230/2 P. (2)
	Chem. 230/2 P. (2)	(2)Chm. 312 Lab.*	(2)Chem. 230/2 P. (2)	(2)Chm. 312 Lab.*	(2)Chm. 230/2 P. (2)	Ed. Cl 2.7
	Chem. 374	Econ. 380*	Chem. 374	Econ. 380*	Chem. 374	Ed. Cl 320*
	Econ. 330	Engl. 342	Econ. 330	Ed. Cl 261"	Econ. 330	Ed. Fdn. 200
	Ed. Cl 273	Ed. Cl 261*	Ed. Cl 273	Ed. Cl 277	Ed. Cl 273	Eng. 342
	Ed. Cl 477	Ed. Cl 277	Ed. Cl 477	Ed. Fdn. 200	Ed. Cl 477	Geog. 201 Lab.*
	Ed. Fdn. 201'	Ed. Fdn. 200	Ed. Fdn. 201'	Eng. 342	Ed. Fdn. 201'	Physics 200
	Ed. Admn. 261"	Ed. Fdn. 201'	Ed. Adm. 251"	Math. 200/1/2	(2)Ed. Adm. 261"	Physics 238
	English 240 (7)	Ed. Adm. 261"	Eng. 240 (7)	Math. 304	Eng. 240 (7)	Zool. 362 Lab.*
	FR. 200 (2)	Math. 200/1/2	(2)Fr. 200 (2)	P.E. 200*	Fr. 200 (2)	
	Geol. 351	Math. 304	Geol. 351	Physics 200	Geol. 351	
	Greek 300	P.E. 200*	Germ. 200 Lab.	Physics 238	Greek 300	
	Hist. 200	Physics 200	Greek 300		Hist. 200	
	Hist. 370	Physics 238	Hist. 200		Hist. 370	
	Math. 200/1/2 (2)	(2)Pol. Sci. 200	Hist. 370		Math. 200/1/2 (2)	
	Math. 304	Zool. 300 Lab.*	Math. 200/1/2 (2)		Math. 304	
	Philos. 340		Math. 304		Philos. 340	
	Physics 238		Philos. 340		Physics 238	
	Pol. Sci. 200		Physics 238		Soc. 360	
	Soc. 360		Pol. Sci. 200			
			Soc. 360			

**FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION**  
**TIMETABLE 1962-63**

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1:30 P.M.	Art 300 Bot. 271 Chm. 312 Lab.* Chem. 370 Chm. 450 Lab.* Econ. 200 Ed. CI 234 Ed. FDN. 201'' Ed. PSY. 276 (2) Ed. PSY. 476 Ed. Admin 261'' English 240 (6) Geog. 201 Geog. 302 Geol. 201 Lab.* Geol. 302 Geol. 351* Germ. 350 Hist. 454* Math. 255= Philos. 344 Phys. Ed. 211' Phys. Ed. 401' Physics 240 Pol. Sci. 310 Psych. 430 Soc. 202 Soc. 376 Stat. 255= Zool. 350 Lab.*	Acctg. 200 Lab.* Anth. 410 Art 250* Art 330* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chm. 370 Lab.* Ed. CI 234 Ed. FDN 201 (3) Ed. PSY 276 (2) Ed. CI 254 Ed. FDN 492 Ed. FDN 261'' (3) Ed. FDN 492 Ed. ADM 261'' (3) English 240 (6) Ed. ADM 261'' (3) Geog. 301 Lab.* Geol. 201 Lab.* Geol. 302 Lab.* Geol. 352* Hist. 525* Math. 255 Lab.* Physics 200 Lab.* Pol. Sci. 310 Psych. 430 Lab.* Stat. 255 Lab.* Zool. 220 Lab.* Zool. 300 Lab.*	Art 300 Bot. 271 Bot. 271 Lab.* Chem. 370 Chm. 450 Lab.* Econ. 200 Ed. CI 234 Ed. FDN 201' Ed. PSY 276 (2) Ed. PSY 476 Ed. ADM 261'' (3) English 240 (6) Geog. 201 Geog. 302 Geol. 201 Lab.* Geol. 302 Geol. 353* Germ. 350 Hist. 350 Hist. 468* Math. 255= Philos. 344 Phys. Ed. 211'' Phys. Ed. 401' Physics 240 Psych. 430 Soc. 202 Soc. 376 Stat. 255= Zool. 350 Lab.*	Anthr. 410 Art 250* Art 330* Bot. 271 Lab.* (2)Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chm. 370 Lab.* Ed. CI 254 Ed. FDN 492 Geol. 201 Lab.* Hist. 352* Math. 354 Lab.*= Psych. 460 Lab.* Stat. 354 Lab.*= Zool. 220 Lab.* Zool. 350 Lab.*	Art 300 Bot. 271 Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 370 Econ. 200 Ed. CI 234 (2)Ed. FDN 201' (3) Ed. PSY 276 (2) Ed. PSY 476 Ed. ADM 261'' (3) English 240 (6) Geog. 201 Geog. 302 Geol. 302 Germ. 350 Hist. 350 Math. 255= Philos. 344 Phys. Ed. 211'' Phys. Ed. 401' Physics 240 Psych. 430 Soc. 202 Soc. 376 Stat. 255= Zool. 350 Lab.*	



## TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
2:30 P.M.	Anthr. 360* Art 230* Art 240* Chem. 230/2 Lab.* Chem. 312 Lab.* (2) Chem. 350 Chem. 450 Lab.* Econ. 200 Econ. Anal. 300 Ed. Cl 288 Ed. FDN 201'' (2) Ed. FDN 201'' (2) Ed. PSY 276 (2) Ed. PSY 476 Ed. ADM 261' (2) English 391 English 394 Geog. 201 Lab.* Geography 300 Geol. 201 Lab.* Geol. 351 Lab.* Germ. 200 Hist. 360 Hist. 454* Latin 200 Math. 200/1/2 Math. 270 Music 250 Philos. 240 Phys. Ed. 205' Phys. Ed. 207'' Phys. Ed. 307' Phys. Ed. 407'' Physics 240 Lab.* Physics 340 Lab.* Pol. Sci. 381 Psych. 460 Zool. 220 Zool. 220 Lab.*	Acctg. 200 Lab.* Art 250* Art 330* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chem. 370 Lab.* (2) Econ. Anal. 300 Ed. FDN 201 (2) Ed. FDN 492 Ed. ADM 261' (2) Geog. 301 Lab.* Geol. 201 Lab.* Geol. 302 Lab.* Hist. 352* Hist. 525* Math. 200/1/2 Math. 255 Lab.* = Music 250 Phys. Ed. 392* Physics 200 Lab.* Physics 240 Lab.* Physics 340 Lab.* Physics 400 Lab.* Psych. 430 Lab.* Stat. 255 Lab.* = Zool. 220 Lab.* Zool. 300 Lab.*	Anthr. 360* Art 230* Art 240* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 350 Chem. 450 Lab.* Chem. 370 Lab.* (2) Econ. Anal. 300 Ed. Cl 288 Ed. FDN 201'' (2) Ed. PSY 276 (2) Ed. PSY 476 Ed. ADM 261' (2) English 391 English 394 Geog. 201 Lab.* Geol. 201 Lab.* Geol. 353* Germ. 200 Hist. 360 Hist. 468* Latin 200 Math. 200/1/2 Math. 270 Music 250 Philos. 240 Phys. Ed. 205' Phys. Ed. 207'' Phys. Ed. 307' Phys. Ed. 407'' Physics 238 Lab.* Physics 340 Lab.* Pol. Sci. 381 Psych. 460 Zool. 220 Zool. 220 Lab.*	Art 250* Art 330 Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chem. 370 Lab.* (2) Econ. Anal. 300 Ed. Cl 288 Ed. FDN 492 Geog. 201 Lab.* Geog. 301 Lab.* Geol. 201 Lab.* Hist. 352* Math. 200/1/2 Math. 354 Lab.* = Phys. Ed. 392* Physics 238 Lab.* Physics 340 Lab.* Physics 380 Lab.* Psych. 460 Lab.* Stat. 354 Lab.* = Zool. 220 Lab.* Zool. 350 Lab.*	Art 230* Art 240* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 350 Chem. 374 Lab.* (2) Econ. Anal. 300 Econ. Anal. 300 Ed. Cl 288 Ed. FDN 201'' (2) Ed. PSY 276 (2) Ed. PSY 476 Ed. ADM 261' (2) English 240 English 391 English 394 Geog. 201 Lab.* Germ. 200 Hist. 300 Hist. 360 Latin 200 Math. 200/1/2 Math. 270 Music 250 Philos. 240 Phys. Ed. 205' Phys. Ed. 207'' Phys. Ed. 307' Phys. Ed. 407'' Physics 238 Lab.* Physics 360 Lab.* Physics 445 Lab.* Pol. Sci. 381 Psych. 460 Zool. 220 Zool. 220 Lab.*	

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
3:30 P.M.	Anthr. 360* Art 230* Art 240* Chem. 230/2 Lab.* Chem. 250 Chem. 312 Chem. 312 Lab.* (2) Chem. 450 Lab.* (2) Econ. 340 Ed. CI 252 Ed. CI 288 Ed. FDN 201" Ed. PSY 310 Ed. ADM 261 Ed. ADM 261' (2) English 240 English 334 Fr. 370 Geog. 201 Lab.* Geol. 201 Lab.* Geol. 351 Lab.* Germ. 210 Hist. 300 Hist. 454* Music 300 Lab. Phys. Ed. 442* Physics 240 Lab.* Physics 340 Lab.* Pol. Sci. 360 Psych. 352 Psych. 382 Zool. 220 Lab.* Zool. 315' Zool. 350 Lab.* Zool. 421"	Art 250* Art 330* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chm. 370 Lab.* (2) Ed. FDN 201 Ed. Admin. 261' (2) Geog. 301 Lab.* Geol. 201 Lab.* Geol. 302 Lab.* Hist. 352* Hist. 525* Math. 255 Lab.* = Music 300 Phys. Ed. 392* Physics 200 Lab.* Physics 240 Lab.* Physics 340 Lab.* Physics 400 Lab.* Pol. Sci. 360 Psych. 430 Lab.* Stat. 255 Lab.* = Zool. 220 Lab.* Zool. 300 Lab.*	Anthr. 360* Art 230* Art 240* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Chem. 312 Chm. 370 Lab.* (2) Chem. 450 Lab.* (2) Econ. 340 Ed. CI 252 Ed. CI 288 Ed. FDN 201" Ed. PSY 310 Ed. ADM. 261 Ed. ADM. 261' (2) English 240 Engl. 334 Fr. 370 Geog. 201 Lab.* Geol. 201 Lab.* Geol. 201 Lab.* Geol. 353* Germ. 210 Hist. 300 Hist. 468* Music 300 Lab. Phys. Ed. 442* Physics 238 Lab.* Physics 340 Lab.* Pol. Sci. 360 Psych. 352 Psych. 382 Zool. 220 Lab.* Zool. 315' Zool. 421"	Art 250* Art 330* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Lab.* Chem. 350 Lab.* Chm. 370 Lab.* (2) Ed. CI 288 Geog. 201 Lab.* Geog. 301 Lab.* Geol. 201 Lab.* Hist. 352* Math. 354' = Phys. Ed. 392* Physics 238 Lab.* Physics 340 Lab.* Physics 380 Lab.* Psych 460 Lab.* Stat. 354 Lab.* = Zool. 220 Lab.* Zool. 350 Lab.*	Art 230* Art 240* Bot. 271 Lab.* Chem. 230/2 Lab.* Chem. 250 Chem. 312 Chem. 374 Lab.* (2) Econ. 340 Ed. CI 252 Ed. CI 288 Ed. FDN 201" Ed. PSY 310 Ed. ADM 261 Ed. ADM 261' (2) English 240 Engl. 334 Fr. 370 Geog. 201 Lab.* Germ. 210 Music 300 Physics 238 Lab.* Physics 360 Lab.* Physics 445 Lab.* Psych. 352 Psych. 382 Zool. 220 Lab.* Zool. 315' Zool. 421"	

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION

## TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
4:30 P.M.	Chem. 230/2 Lab.* Arch. 375* Chem. 230/2 P. (2) Astron. 253* Chem. 312 Lab.* (2) Chem. 230/2 P. Chem. 455/655 Econ. 370* Ed. CI 330* Ed. PSY 474 Lab. Ed. PSY 478* English 240* (3) English 364* English 386* Fr. 200 Fr. 400* Greek 100 Hist. 309* Math. 404* Music 400 Phil. 360 Phys. Ed. 442* Phys. Sci. 341* Phys. 100* Physics 240 Lab.* Physics 340 Lab.* Physics 240 Lab.* Physics 340 Lab.* Physics 400 Lab.* Soc. 414* Soc. 320* Zool. 220 Lab.*	Chem. 230/2 Lab.* Arch. 375* Chem. 230/2 P. (2) Astron. 253* Chem. 312 Lab.* (2) Chem. 230/2 P. Chem. 455/655 Econ. 370* Ed. CI 330* Ed. PSY 474 Lab. Ed. PSY 478* English 240* (3) English 364* English 386* Fr. 200 Fr. 400* Greek 100 Hist. 309* Math. 404* Music 400 Phil. 360 Phys. Ed. 442* Phys. Sci. 341* Phys. 100* Physics 240 Lab.* Physics 340 Lab.* Physics 240 Lab.* Physics 340 Lab.* Physics 400 Lab.* Soc. 414* Soc. 320* Zool. 220 Lab.*	Chem. 230/2 Lab.* Arch. 395* Chem. 230/2 P. (2) Astron. 253* Chem. 455/655 Econ. 370* Ed. CI 330* Ed. CI 478* Ed. CI 494* Ed. FDN 414* Ed. PSY 308* Ed. PSY 474 Fr. 200 Lab. Fr. 330* Fr. 350* Greek 100 Hist. 200* Hist. 210* Hist. 322* Physics 100* Physics 238 Lab.* Physics 340 Lab.* Physics 380 Lab.* Soc. 414* Stat. 205*	Chem. 230/2 P. (2) Chm. 374 Lab.* (2) (2) Chem. 455/655 Ed. PSY 308* Ed. PSY 474* English 364* Fr. 200 Greek 100 Phil. 360 Physics 238 Lab.* Physics 455 Lab.* Zool. 220 Lab.*		

# FACULTIES OF ARTS & SCIENCE, COMMERCE, EDUCATION, & DEPT. OF PHYSICAL EDUCATION TIMETABLE 1962-63

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
5:30 P.M.	Ed. CI 330* Ed. PSY 478* English 240* (3) English 364* English 386* French 400* Hist. 309* Math. 404* Music 303 Phys. Sci. 341* Soc. 320*	Arch. 395* Astron. 253* Econ. 370* Ed. CI 478* Ed. CI 494* Ed. FDN 414*= Ed. PSY 308* Fr. 330* French 350* Hist. 200* Hist. 210* Hist. 322* Physics 100* Soc. 414*= Stat. 205*	English 240* (3) English 364* English 386* French 400* Hist. 309* Math. 404* Music 303 Music 400 Lab. Phys. Sci. 341* Soc. 320* Stat. 205 Lab.*	Arch. 395* Astron. 253* Econ. 370* Ed. CI 330* Ed. CI 478* Ed. CI 474* Ed. FDN 414*= Ed. PSY 308* Ed. PSY 478* Fr. 330* French 350* Hist. 200* Hist. 210* Hist. 322* Physics 100* Soc. 414*= Stat. 205*	Ed. CI 478* Ed. PSY 308* Ed. PSY 474* English 364*	
6:30 P.M.		Soc. 502*	Stat. 205 Lab.*			

## TO BE ARRANGED

Geog. 407  
 Geog. 424  
 Music 200  
 Music 215  
 Music 225  
 Music 300  
 Psych. 504  
 Phys. Ed. 218  
 Phys. Ed. 228

# INDEX

	Page
Academic Schedule .....	12
Academic Honors .....	22
Academic Regulations .....	19, 20, 21
Academic Staff—See under departments and at page .....	7-10
Accounting .....	69, 103
Administrative Officers .....	6
Admission Regulations .....	16, 17, 32, 33, 40, 42, 100, 106, 131, 135, 137, 140
Advanced Standing .....	17, 122
Agriculture, B.Sc. in .....	92
Agriculture, Faculty of .....	91
Agricultural Economics .....	95
Agricultural Engineering .....	96
Animal Science .....	96
Anthropology .....	69, 88
Appeals re Examination Results .....	20
Appeals, General .....	24
Art .....	69
Arts and Science, Faculty of .....	40
Astronomy .....	69
Athletics .....	28
Attendance .....	24
Awards—	
Matriculation .....	151 - 164
Undergraduate .....	164 - 187
Made by other institutions .....	187
Bachelor of Arts, Patterns .....	56
Bachelor of Commerce .....	101
Bachelor of Education .....	113
Bachelor of Education, Special Programs .....	116 - 122
Bachelor of Music .....	67
Bachelor of Science, Patterns .....	62
Bacteriology .....	50
Biochemistry .....	44
Board of Governors .....	4
Bookstore .....	27
Botany .....	44, 69
Bursaries, Scholarships and Fellowships .....	150
Business .....	104
Calendar of University Activities .....	12
Chancellor .....	4
Canadian Officers' Training Corps .....	193

# INDEX—CONTINUED

	Page
Chemistry .....	44, 70
Classics .....	45, 72
Classification of Students .....	17
Combined Courses—	
B.A., LL.B. ....	66
Commerce, Faculty of .....	99
Conduct and Discipline .....	25
Counselling Services .....	26
Dairy Science .....	96
Dean of Women .....	25
Deans' Council .....	25
Deferred Final Examinations .....	20
Degrees and Diplomas Offered .....	30
Degrees in Absentia .....	21
Degrees with Honors in Arts and Science .....	23, 42
Degrees with Distinction .....	23
Dentistry, Faculty of .....	137
Diploma in Art .....	68
Discipline .....	25
Drama .....	58
Economics .....	85
Education, Faculty of .....	105
Educational Administration .....	128
Educational Curriculum and Instruction .....	123 - 127
Educational Foundations .....	127
Educational Psychology .....	127
Employment Service .....	27
Engineering, Faculty of .....	131
Engineering, Bachelor of Science in .....	131
English .....	46, 74
Entomology .....	47, 97
Evening Credit Program .....	31
Examinations .....	19, 37
Extracurricular Activities, Relation of Scholastic Standing to .....	24
Farm Management .....	95
Fees .....	34, 35, 36
Financial Aid .....	189
Fine Arts .....	75
First-Class Standing .....	22
First-Year Students, Committee on .....	41
French .....	46, 81



# INDEX—CONTINUED

	Page
General Courses, Arts and Science .....	54
Genetics .....	48, 97
Geography .....	47, 77
Geology .....	48, 78
German .....	82
Governing Body .....	4
Grading System .....	22
Graduate Studies, Faculty of .....	17, 149
Greek .....	73
History .....	49, 79
Household Economics .....	135
Household Economics, B.Sc. Degree in .....	135
Household Economics, School of .....	135
Industrial Arts, B.Ed. Degree .....	129
Late Registration .....	18
Latin .....	46, 72
Library Staff .....	6
Mathematics .....	49, 80
Matriculation .....	40
Medical Services .....	26
Medicine, Faculty of .....	138
Microbiology .....	65
Minimum Length of Time to Complete Course .....	30
Modern Languages .....	50, 81
Music .....	76
National Employment Service .....	27
Nursing Education .....	144
Nursing Programs .....	139
Nursing, School of .....	139
Obstetrics and Gynaecology .....	144
Officers Training Units .....	195
Ontario Veterinary College .....	97
Payment of Fees .....	36
Philosophy .....	51, 83
Physical Education, B.P.E. Degree .....	146
Physical Education, School of .....	145
Physical Examination .....	16
Physics .....	52, 83
Physiology .....	52
Plant Science .....	97
Political Economy .....	53, 85

# INDEX—CONTINUED

	Page
President .....	4
Principal .....	4
Prizes .....	150
Programs of Study .....	29, 30, 31, 41, 92, 101, 111, 135, 137, 139, 142, 146
Promotion Regulations .....	23, 41, 92, 100, 135
Provost .....	25
Psychology .....	53, 87, 104
Public Health, Nursing .....	142
Railway Rates .....	27
Registration .....	18, 107, 133
Regular Officer Training Plan .....	189
Regulations, Academic .....	19, 20, 21
Regulations, Special .....	25
Reserve Officer Training Plan .....	192
Resident Requirements .....	23
Royal Canadian Air Force .....	194
Scholarships .....	150
Science, General .....	66
Senate .....	5
Slavonic and Soviet Studies .....	54
Sociology .....	54, 87
Soil Science .....	97
Sports .....	28
Statistics .....	89, 104
Student Affairs .....	25
Student Government .....	27
Students' Union .....	25
Summer Session .....	31
Supplemental Examinations .....	20
Table of Contents .....	3
Teachers, Certification of .....	109 - 111
Test Weeks .....	19
Time Required to Complete Courses .....	30 - 31
Timetable .....	197 - 206
University Naval Training Division .....	192
University Officer Training Units .....	189
Unsatisfactory Standing .....	23
Veterinary College, Ontario .....	97
Veterinary Science .....	97
Visitor .....	4
Withdrawal from the University .....	26
Zoology .....	54, 90



